15 CENTS A COPY

THE OIL WEEKLY

OIL & GAS ENGINEERING

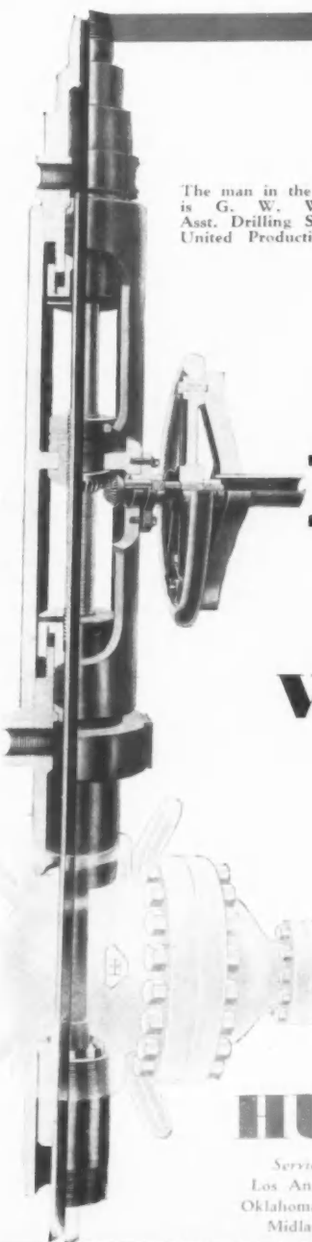
News Statistics

The man in the picture is G. W. Wheeler, Asst. Drilling Supt. of United Production Co.

NOW

SAFETY INSURANCE *with*

HUGHES
VALVES & TUBING HEAD



The photograph above shows the hook-up on the United Production Company's O'Brien No. 1 well at Refugio.

The hook-up consists of Hughes' 5,000-pound test valves and fittings and a 6⅝" Hughes (Brown) Safety Tubing Head.

Pressure was 2,100 pounds.

Hughes Valves and Fittings used with a Hughes (Brown) Tubing Head insures maximum safety, economy and flexibility of handling the production of even the highest pressure wells.

HUGHES TOOL COMPANY

Service Plants
Los Angeles, Calif.
Oklahoma City, Okla.
Midland, Texas

Main Office and Plant
HOUSTON, TEXAS

Export Offices
Woolworth Building,
New York City

April 10, 1931

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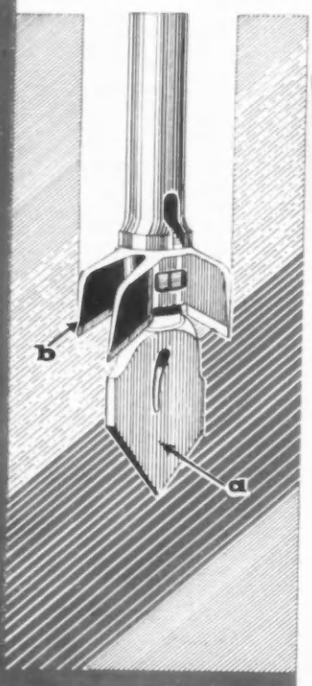
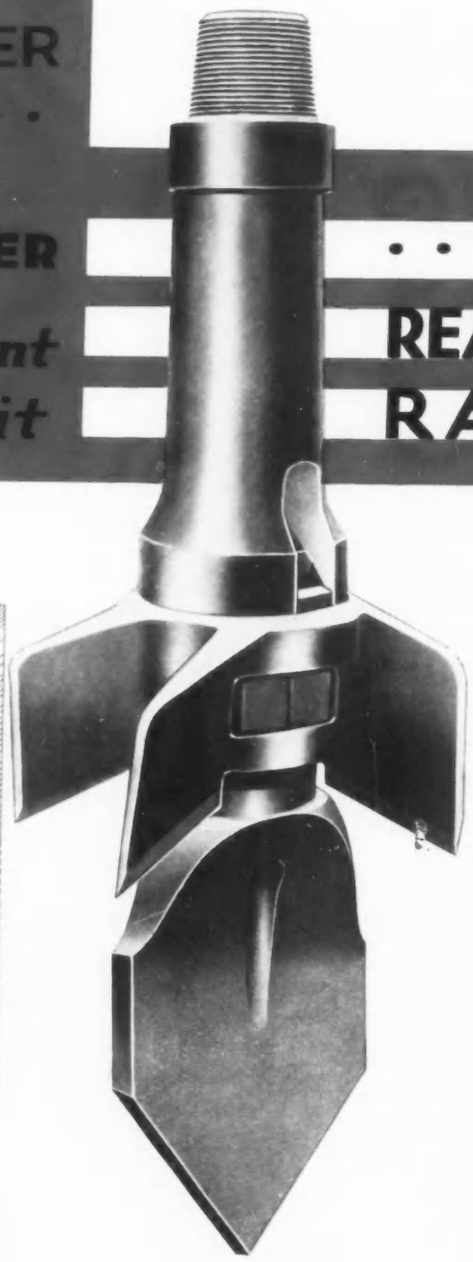
for FASTER STRAIGHTER HOLE · · · · USE THE M-5 REAMER with *Diamond Point Fish Tail Bit*

· · · · WHEN REAMING OUT RAT HOLES





THIS IS the fastest, most efficient combination you can use for reaming out small "rat holes" and core holes to full gauge. The fishtail (a) serves as a guide, steadying the reamer and keeping the hole straight, while the reamer (b) will make full-gauge hole twice as fast as when using a reamer alone. Supplied in all standard sizes and various combinations of sizes to meet practically any individual condition. Complete information and suggestions for use on request.

GLOBE OIL TOOLS CO.

LOS NIETOS, CALIFORNIA

Successors to

H. C. Smith Manufacturing Co., Inc. — Wieman-Kammerer-Wright Co., Inc. — National Tool & Metals, Inc.

Branches:

Ventura, Calif. — Bakersfield, Calif. — Kettleman Hills, Calif. — Taft, Calif.

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The OIL WEEKLY. Issued weekly by the Gulf Publishing Co., 3301 Buffalo Drive, Houston, Texas. Subscription price $1.00 per year; 15 cents per copy. Entered as second-class mail matter December 23, 1916, at the post office at Houston, Texas, under act of March 3, 187[illegible]

STURDY and EFFICIENT

Fig. 601 Gaso Walking Beam Pump for oil or water. Connects direct to the beam by means of pipe or wood pitman. For 450 to 600 lbs. working pressures.

Fig. 604 Gaso Walking Beam Pump for gas or vacuum. Used to take the gas from pumping wells or to put vacuum on the well. Gives 26 to 28 points vacuum

Walking Beam, Rodline and Piston Power Pumps — by GASO

These pumps have been perfected through more than a decade of development by an engineering staff that knows intimately the requirements of the oil industry. Carried in stock for immediate delivery.

Send us your requirements for detailed data on GASO Pumps for every purpose.

GASO PUMP & BURNER MFG. COMPANY
Tulsa, Oklahoma
Export Office: New York, New York

Fig. 301 Gaso Piston Power Pump. Jerker Pattern. With it ands the high pressure of main pipe lines, and is equally suitable for any low pressure work wherever push and pull or crank power can be utilized. 250 to 300 lbs. working pressure

Fig. 604½ Gaso Power Pump for gas or vacuum. Similar to Fig. 604, except designed to connect with the power or surface rods on the well.

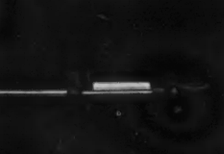


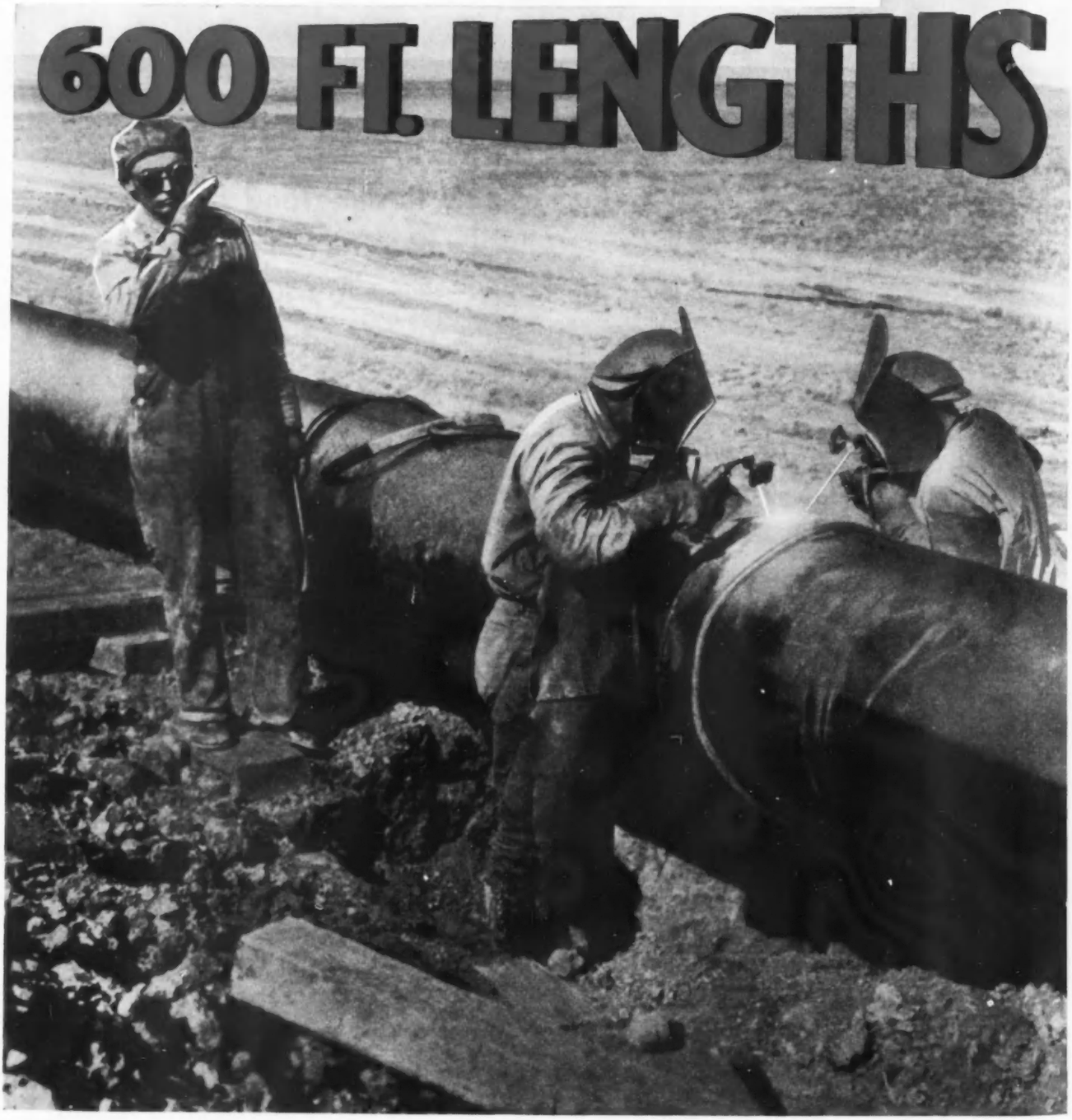
Fig. 201 Gaso Rodline Pump. Used in connection with the rod or shackle line between the power and well, or connected to the power line direct with pitman. 450 lbs. working pressure.

GASO PUMPS

for every oil industry need

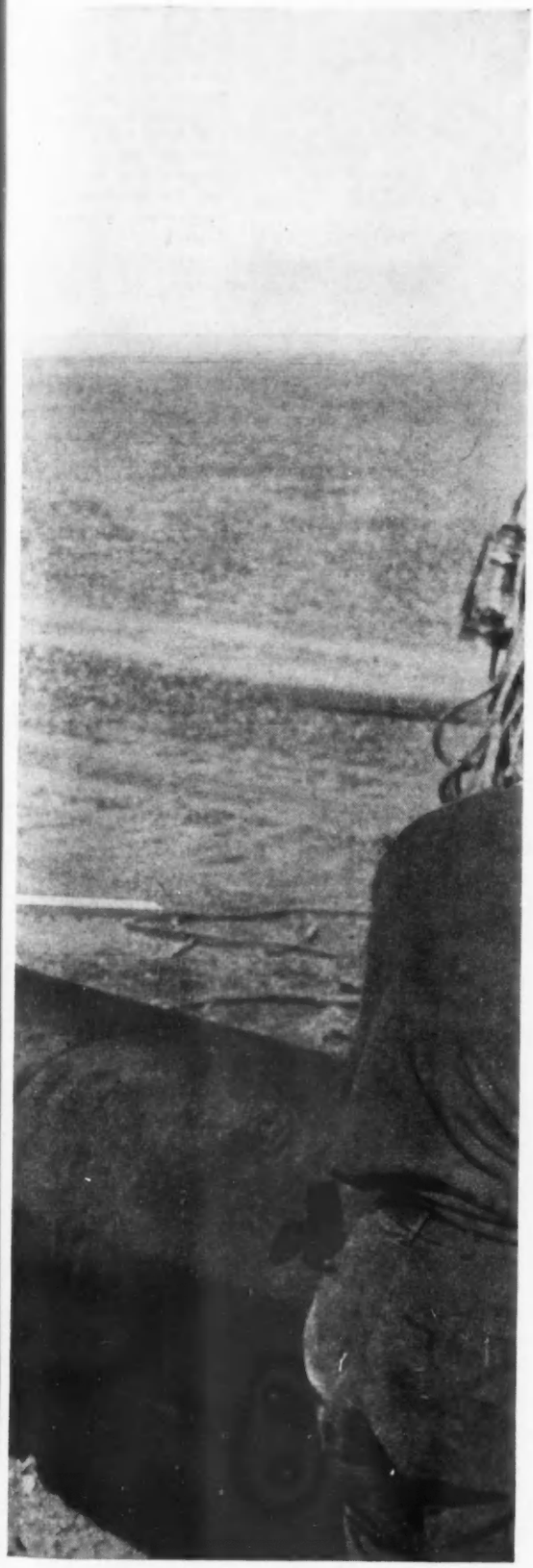
The NEW

600 FT. LENGTHS



SMITH WELDED

PIPE LINE AT THE



WITH SMITH Field Welding, the pipe line constructor or contractor can have the pipe delivered alongside the ditch in 300 to 600-foot lengths—with all bends in position—ready to tie in and dump in.

SMITH Field Welding is available to any user of SMITH Welded Pipe.

◆ ◆ ◆ ◆ ◆

A new book, "The New Way of Designing and Building Gas Lines with SMITH Welded Pipe," provides for the benefit of the industry a scientific method, simple in application, to determine the factors effecting a minimum cost of pipe lines. A copy will be sent upon request to anyone interested.

A. O. SMITH CORPORATION

General Offices: Milwaukee, Wisconsin

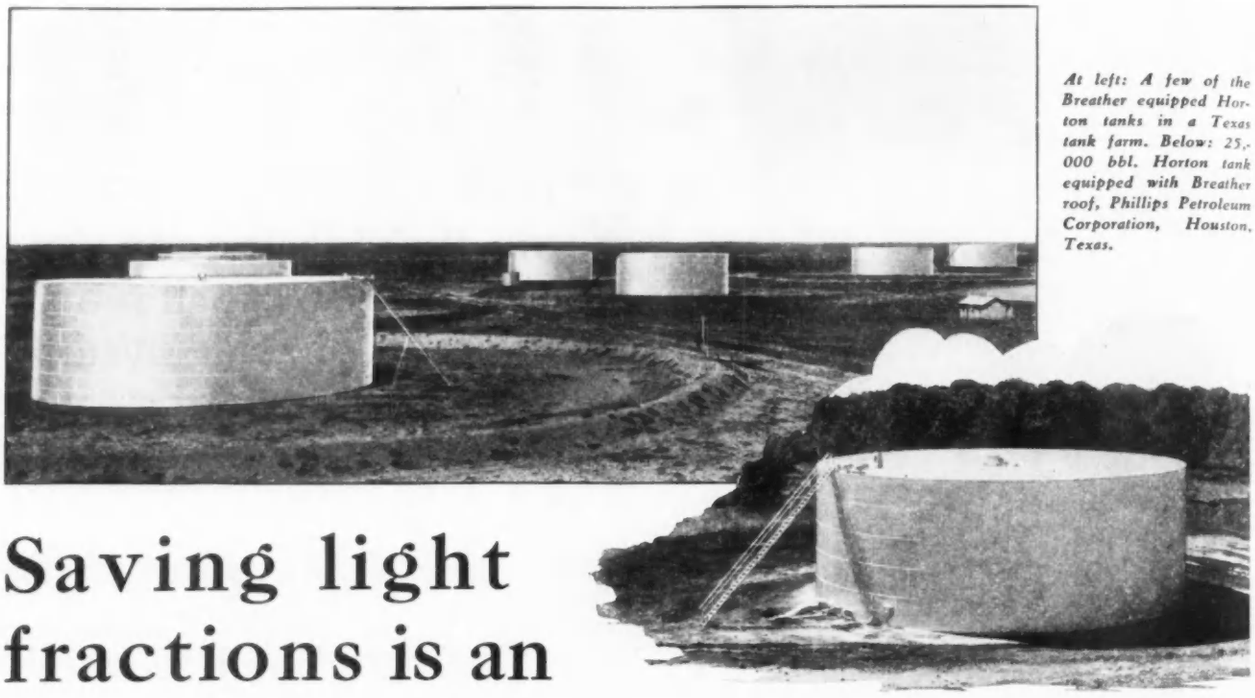
OIL AND GAS FIELD PRODUCTS DIVISION

District Offices:

New York , Tulsa , Houston , Los Angeles

GAS LINE PIPE

LOWEST COST PER MILE



At left: A few of the Breather equipped Horton tanks in a Texas tank farm. Below: 25,000 bbl. Horton tank equipped with Breather roof, Phillips Petroleum Corporation, Houston, Texas.

Saving light fractions is an important phase of conservation

WIGGINS BREATHER ROOFS cut evaporation losses » » » » »

WHETHER conservation is looked at from the viewpoint of saving natural resources or of saving your own investment any plan to stop the loss of light fractions from oil in storage should be an important part of it. It is not logical to waste the vapor —the most valuable part of the crude— after it has been brought out of the ground, and it is equally illogical to waste the money that has been spent on its production.

Wiggins Breather Roofs, which reduce this vapor loss at very low cost, can be furnished for new or existing tanks. They repay their additional cost in a few months.

A tank 144 feet in diameter, for instance, storing motor fuel gasoline, loses 1300 to 1600 bbls. annually when equipped with an ordinary "gas-tight" roof. A Wiggins Breather Roof reduces this loss to 20 to 60 bbls. annually.

Thermal breathing loss from standing storage tanks is stopped by taking care of volumetric expansion and contraction. No vapor is allowed to escape under ordinary conditions. Fire hazard is also decreased; and the Breather may be filled above the top angle so that the roof rides on the oil, to increase the storage capacity of the tank and to reduce corrosion with sour oil.

Write our nearest office for a booklet on the Breather Roof, and estimates on converting your cone roofs to Breathers or on roofs for new tanks.

STOP FIRE AND EVAPORATION LOSSES

CHICAGO BRIDGE & IRON WORKS

Dallas	3338 Magnolia Bldg.	New York	3144 Hudson Terminal Bldg.
Houston	1120 Electric Bldg.	Philadelphia	2615-"1616" Walnut St. Bldg.
Tulsa	2405 Exchange Bank Bldg.	Boston	1518 Consolidated Gas Bldg.
Birmingham	1538 Fiftieth St. N.	San Francisco	1050 Rialto Bldg.
Chicago	2142 Old Colony Bldg.	Seattle	4322 Smith Tower
Detroit	1515 Lafayette Bldg.	Los Angeles	Subway Terminal Bldg.
Cleveland	2242 Midland Bank Bldg.	Havana, Cuba	Apartado 2508

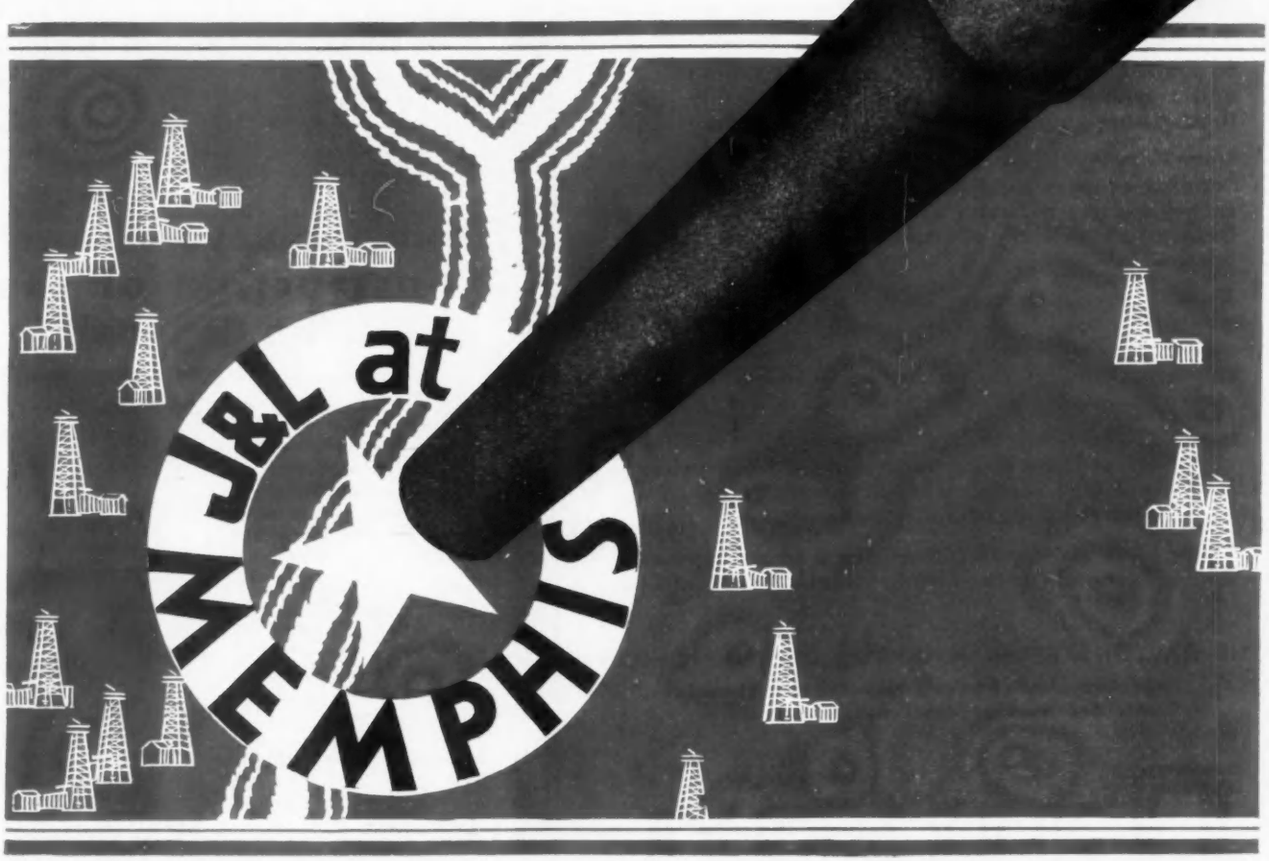
WIGGINS ROOFS

SERVICE THAT BLANKETS the MID-CONTINENT, GULF COAST and TEXAS FIELDS

CASING DRILL PIPE · TUBING LINE PIPE · J&L PIPE · SEAMLESS · WELDED

Intimate knowledge of the oil man's problems tells J & L the *kind* of pipe he needs. Intimate knowledge of steel problems tells J & L how to *make* pipe to conform to these requirements. Through the J & L Memphis warehouse, this pipe is available to the mid-continent, southwestern and Gulf Coast regions, with one- to three-day service to most fields, and five-day service to even the most distant points.

Railways and waterways have been coordinated to perfect J & L distribution and speed up its service. Ownership-control over all raw materials and processes of manufacture permits J & L to duplicate its products and results day after day, week after week—year after year. Experienced personnel fills your orders with intelligence. J & L service brings you the pipe you want, when . . . where . . . and as you want it.



JONES & LAUGHLIN STEEL CORPORATION

AMERICAN IRON AND STEEL WORKS

JONES & LAUGHLIN BUILDING, PITTSBURGH, PENNSYLVANIA

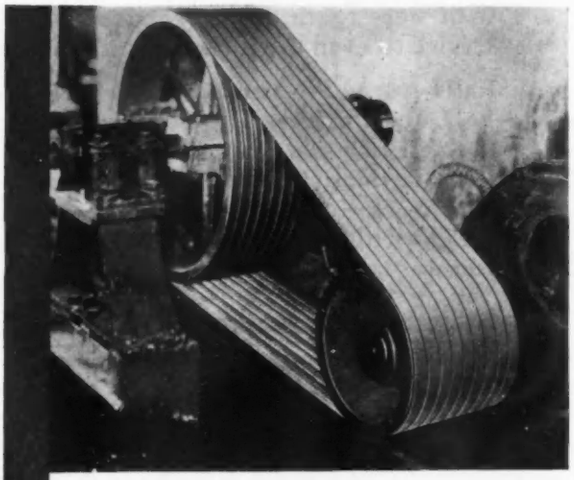
J&L STEEL

Manufacturers of Seamless and Welded Casing, Tubing, Drill Pipe and Line Pipe, and Welded Steam, Gas and Water Pipe in both Black and Galvanized.

Also makers of Bars, Shapes and Plates, Reinforcing Bars, Cold Finished Steel, Junior Beams, Steel Piling, Fabricated Structural Work, Steel Barges, Wire Products and Tin Mill Products.

Install DAYTON COG-BELT DRIVES

...They are rugged
...They last longer



Today, as never before in American history, the oil industry is pushing forward toward a new standard of production in which inefficiency and wasteful equipment have no part.

In Dayton Cog-Belt Drives the industry finds new and revolutionary advantages. For example, note these strong points:

More Power Delivered. **Cog construction assures easy bending around small-diameter pulleys. Die-cut accuracy assures a firmer grip on the pulley grooves. *Both* assure delivery of more power because of less friction loss.**

More Rugged. **Dayton Cog-Belts are made by patented processes from exceptionally strong, selected materials, with a permanently pre-stretched strength section. They're built for harder, heavier service.**

Longer Life. **There's less wear on bearings . . . less tension. The shorter, firmer-gripping belts eliminate vibration and cut down interruptions for servicing. Moreover, they're not affected by moisture. They last far longer than ordinary belts.**

Prove these statements! **Send for a free sample section of belt and for the new Dayton Cog-Belt Catalog.**

THE DAYTON RUBBER MFG. CO., DAYTON, OHIO

Factory Distributors in Principal Cities and all Westinghouse Electric and Manufacturing Company Sales Offices

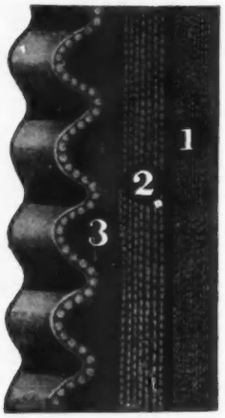
Note the Revolutionary Construction of the Dayton Cog-Belt

1 The outer section gives balance. Composed of numerous layers of vulcanized, strong bias-cut cord fabric. Bias-cut to accommodate bending without strain or distortion. This is another reason why Daytons don't heat and last longer than other belts

Cross Sectional View

2 The *"Neutral axis" or strength* section, extends across the entire width of the belt. Die-cut and pre-stretched *permanently* by a patented and exclusive Dayton process. That's why Daytons have a firmer grip, smoother action, and require less servicing in adjustments.

3 The cog *construction* permits Dayton Cog-Belts to flex naturally and easily around even the smallest pulleys without distortion, buckling or rippling. Dayton's cog construction is an exclusive feature. It is found *only* in Dayton Cog-Belts.



Side View

Dayton COG-BELT DRIVES

Complete Drives—Pulleys and Belts—in stock—all ratios 2 H. P. to 100 H. P.

h-e-a-v-e HO!

"VULCANS" are a match for the burliest man-power that ever heaved on a Tong handle. Every part of this famous tool is built to bear its share of the load. Chains are proof-tested and *certified.* Jaws and Handle are tough drop-forgings—Through-Bolt is extra heavy, and its U. S. Standard Nut simplifies replacement. Nine sizes with either Flat Link or Cable Chain.

J. H. WILLIAMS & CO.
"The Wrench People"
75 Spring St., New York

BUY FROM YOUR DISTRIBUTOR

GENUINE
WILLIAMS
SUPERIOR DROP-FORGED TOOLS
"VULCAN"
CHAIN PIPE TONGS

WESTERN WAREHOUSE, SALES OFFICE, CHICAGO — WORKS, BUFFALO, N. Y.

SYFO CLINOGRAPH

Sectional view of a SYFO CLINOGRAPH. It is either let down on a wire line or can be dropped into the hole by the "Go-Devil" method prior to pulling out the drill stem.

Safe-Speedy-Accurate

The economic results of the crooked hole is immediately felt in increased drilling costs and later in greater production costs. Drillers today are striving to keep the hole straight.

This crooked hole problem has brought about the appearance of a large number of devices for indicating any deviation from the vertical. Most common is the Acid Bottle, dangerous to handle, slow in operation, in accurate in results and difficult to interpret.

The SYFO CLINOGRAPH provides the remedy. It not only affers you an infallible means of determining the degree of deviation but the SYFO does it quickly so that daily tests are not a burdensome interruption to drilling. It operates without acids; is accurate and it provides a permanent record on paper for filing. Durable, easy to understand and operate.

The SYFO is leased, not sold. Write for Catalogue and quotations, stating conditions and number of wells.

SPERRY-SUN WELL SURVEYING CO.

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COMMANDER OF REVENUE CUTTERS *at Lake Charles*

Over in the Louisiana district, Ford DeCordova is Commander of a fleet of Revenue Cutters.

Not Uncle Sam's rum chasers, but J. S. Abercrombie Inside and Outside Cutting Tools.

Every time he runs an Abercrombie Inside Cutting Tool to cut out clogged screen . . . some operator's production revenues jump up. Every time he runs an Abercrombie Outside Cutting Tool to cut out a string of stuck drill pipe, some operator's fishing job costs go down—which is the same as having his revenues pushed up. When Ford steps up on the derrick floor, he brings with him a field-proven tool with nine years' record of performance, and a personal experience which includes more than ten years as a rotary driller.

Ford DeCordova, in the Louisiana district, typifies J. S. Abercrombie Red Ball Cutting Service . . . and you get the same fine combination of time-tried tools and field-experienced men wherever you are when you call for this service!

J. S. Abercrombie Co.
21ST FLOOR GULF BLDG.
HOUSTON - TEXAS

RED BALL CUTTING SERVICE

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INSIDE AND OUTSIDE CUTTING CALL
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Long Distance 200
Arch Owens ..Lehigh 7586
H. C. Fouts ..Lehigh 8445
C. M. & R. H. Abercrombie . ..Lehigh 6902
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LAKE CHARLES
Ford de Cordova, 'Phone 584

-and how!

Williamsport Wire Line

brings in Mary Sudik number one

Every manufacturer naturally likes to have his product identified with any successful operation.

And because of this the memorable Mary Sudik No. 1 will live long in the memory of drillers.

Williamsport Lines have been favorably identified many, many times in the deepest wells in the United States and abroad.

Williamsport Lines are Reliable. They are built for long enduring service and they seldom fail.

You will find a service warehouse near you and a capable Wire Line engineer in charge.

WILLIAMSPORT WIRE ROPE COMPANY

Main Office and Works: Williamsport, Pa. *General Sales Offices:* 122 S. Michigan Ave., Chicago, Ill.

OIL COUNTRY SALES OFFICES:

Williamsport Bldg., Fourth and Midland Valley Tracks, Tulsa, Okla.; 1516 Chestnut St., Houston, Texas

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"See American First"

American Ends in "I CAN"!

¶Nowadays we buy an article for its usefulness. The paramount questions in our minds are: *What can it do? —How will it perform?*

¶There is no better Oil and Gas Separator than *the Improved* AMERICAN. *The Improved* AMERICAN completely strips all the oil from the gas. It does its work perfectly, which has been proved by actual use in the field under most severe conditions.

Its performance is in its name — Ameri-CAN

The Improved American Oil and Gas Separator

Equipped with B. S. & B. Spray Condenser

¶Quality pays in *any* product and should be *demanded* in an Oil and Gas Separator. AMERICAN quality begins with the selection of Flange Quality Steel Plates. Then every seam is B. S. & B. Flexwelded! B. S. & B. Flexwelded Vessels are produced by a shielded arc process developed exclusively in our Oklahoma City plant. Every B. S. & B. Flexwelded seam is as strong as the parent metal. Every B. S. & B. Flexwelded seam is ductile. Every B. S. & B. Flexwelded seam resists corrosion.

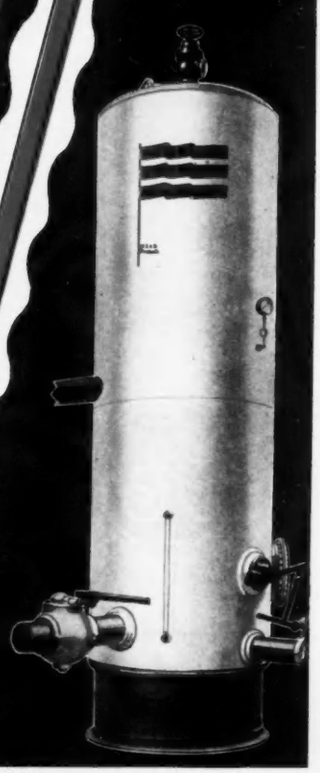
¶ Every *Improved* AMERICAN is hydrostatically tested at the plant to twice its rated working pressure.

For safety as well as performance, insist on an AMERICAN. It is a B. S. & B. Flexwelded Pressure Vessel!

¶ See the AMERICAN in action, and you'll be for AMERICAN FIRST!

¶American Separators are available at the fifty B. S. & B. Branches throughout the Mid-Continent and Rocky Mountain Fields, where a qualified service man is ready to take care of your requirements.

May we prove by actual demonstration that AMERICAN truly ends in "I can" in performance as well as word (s)? Or may we talk AMERICAN SEPARATORS to you through a letter or representative? Address Dept. AA-20.



American Tank & Equipment Corp.

A SUBSIDIARY OF
BLACK-SIVALLS & BRYSON, Inc., Bartlesville, Okla.
OKLAHOMA CITY — OKLAHOMA
(*Formerly* AMERICAN TANK COMPANY)

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G-E Type MTO two-speed, wound-rotor, oil-well motor available in ratings of 35/15-, 50/20-, 55/25-, and 75/35-hp., for either 50- or 60-cycle supply, and suitable for either direct or belt drive. All sizes have the same general characteristics

ONE Motor

for all power operations at a producing well---

THE General Electric Type MTO oil-well motor with two adjustable speeds is suitable for every power operation at a producing well—pumping, pulling, cleaning, bailing, swabbing, shaking-up, and even deepening. Only the two-speed wound-rotor type of oil-well motor can meet *all* these requirements.

Here's a motor that can be used with every type of rig—the old standard or more recent designs. On the pumping connection, the number of strokes per minute can be adjusted to meet the exact requirements of each well without changes in gears or pulleys. In any pulling operation, the torque, speed, and acceleration are all under the control of the operator. This feature facilitates "spotting" the load and eliminates unnecessarily heavy starting current and mechanical shocks. The high torque of this motor (425 per cent, or more, of full-load torque) is backed by unusually high thermal capacity, permitting overload performance far in excess of that available with other types of drives, or even other types of motors.

Type MTO motors with unit control are available through G-E warehouses located near your operations. A nearby G-E office will be glad to provide complete information.

Type MTO is the most flexible drive you can use at your producing well; its worth has been proved by more than 18 years of service.

200-439

GENERAL ELECTRIC

SALES AND ENGINEERING SERVICE IN PRINCIPAL CITIES

SPANG
WELDED
LINE PIPE . . . DRIVE PIPE
STANDARD PIPE . . . CASING
TUBING . . . LARGE O. D. PIPE
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CASING . . . TUBING
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PREMIER
TESTED
Welding Wires

Superiority Proved by Service

Of equal importance to skill is the quality of Welding Wire. Good wire means perfect work, satisfied customers and lower shop costs. Premier Welding Wire is good wire—proved superior under all conditions of service—both electric and gas. Each bundle is shop tested to assure its uniform structure, free flowing and deeply penetrating qualities. Today, write us about your welding problems —no obligation.

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AMERICAN STEEL & WIRE COMPANY

208 South La Salle Street, Chicago SUBSIDIARY OF UNITED STATES STEEL CORPORATION And All Principal Cities

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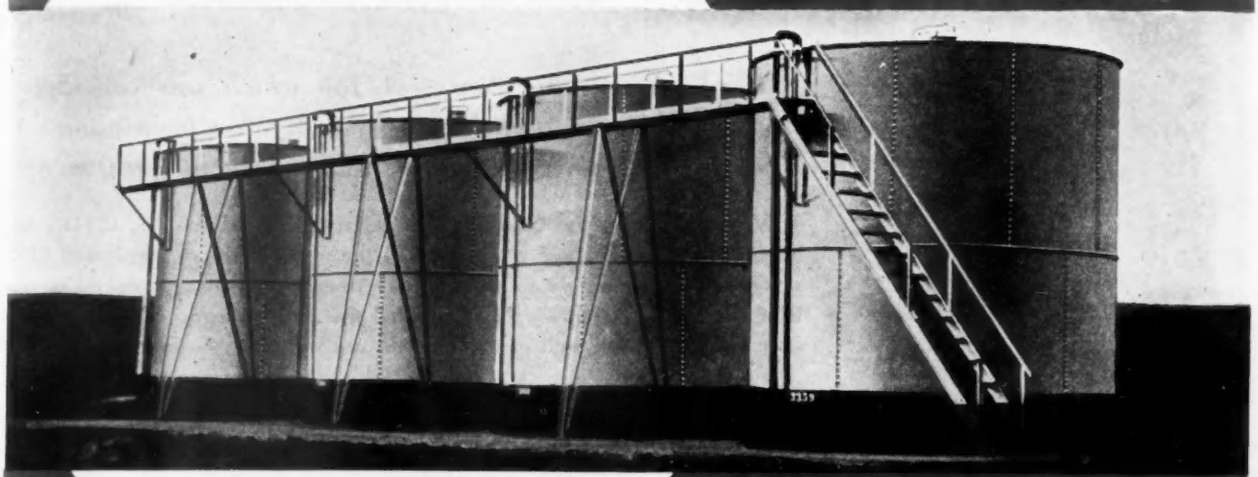
BUTLER



BOLTED TANKS USED 8 YEARS

EIGHT years ago the Ohio Oil Company erected this battery of 500 barrel tanks. For eight years it served in the Lance Creek Field of Wyoming.

Recently the Keyes-Butler Tank Company, a unit of the Butler field service organization, cut the battery down and re-erected it.

After eight years of service the only new material needed in re-erection was new bottoms. The eight year old body and deck sheets were in excellent condition.

Like many others, the Ohio Oil Company has standardized on Butler Bolted and Welded Oil Field Tanks in all its operations which extend over Wyoming and Montana.

TAKEN DOWN... RE-ERECTED

If you wish the substantial kind of economy that comes from long wear, low maintenance, oil conservation and simplified portability—call a Butler field office for dependable day or night erection, cutting down and re-erection service.

General Export Distributors

OIL WELL SUPPLY COMPANY

Lincoln Building,

London NEW YORK Tampico

Representative in Argentina

THE NATIONAL SUPPLY COMPANY

NEW YORK

BUTLER FIELD TANK SERVICE

These reliable field organizations are ready to render speedy field tank and ready-made steel building service:

Drane-Humphrey Co., at San Angelo, Pyote, Best and McCamey, Texas; and Hobbs, N. M.

Keyes-Butler Tank Co., of Casper, Frannie, and Cody, Wyoming.

Drane Tank Co., at Tulsa, Seminole, Oklahoma City, Okla.; Wichita, McPherson and Lyons, Kans.; Longview, McCamey and Pampa, Texas.

Gulf Coast Tank Company, 1612 Moffit St., Houston, Luling, Refugio, Pettus, Grand Saline, and Arp, Tex. V. P. Hughes, Prop.

Thomas Moran at Oil City, Shreveport, New Iberia, Lake Charles, Zwolle, Houma and Carterville, Louisiana; Henderson and Arp, Texas.

BUTLER MANUFACTURING COMPANY

1246 Eastern Ave., Kansas City, Mo. 946 Sixth Ave., S. E., Minneapolis, Minn.

Here's NEWS . . . 6766 feet of 13⅜"-68-pound Casing . . . 230 Tons . . . Landed Safely and Cemented . . . With the Help of Baker Cement Equipment

Baker Cement Float Collar

Baker Cement Whirler Shoe

Here's News—Big News—A Job which was considered impossible of accomplishment by many, has been done successfully, with the able help of Baker Cement Equipment.

We quote, from the Coalinga Daily Record, of March 18, 1931: "Another drilling record was established in the north dome of Kettleman Hills yesterday afternoon when the North American company, operating on Blauvelt lease, section 36, 21-17, landed the longest string of 13⅜" casing ever put into an oil well in any field in the world.

"The task of landing and successfully cementing this long, heavy string of pipe was considered by many an almost impossible task, and representatives of practically every company interested in Kettleman Hills, as well as others interested in the industry, were on the lease to witness the operation, which has proven beyond any question the feasibility and practicability of handling such a string of large-size casing.

"The time required in completing the job, from start to finish, was 18 hours and 40 minutes."

This string of 13⅜" casing weighed 460,088 pounds, or 230.044 tons. It was equipped with a Baker Cement Float Collar and a Baker Cement Whirler Shoe—see illustrations on this page.

This string of casing cost approximately $30,000—a lot of money. The insurance provided by Baker Cement Equipment, to float it and land it safely, as well as to assure a good cement job the first trial, WAS SLIGHTLY LESS THAN ONE PER CENT OF THE COST OF THE STRING.

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THE OIL WEEKLY

APRIL 10, 1931
Vol. 61, No. 4

S. W. ROBINSON
Editor

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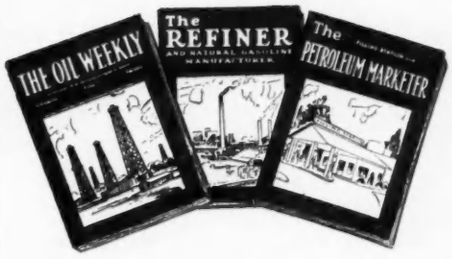

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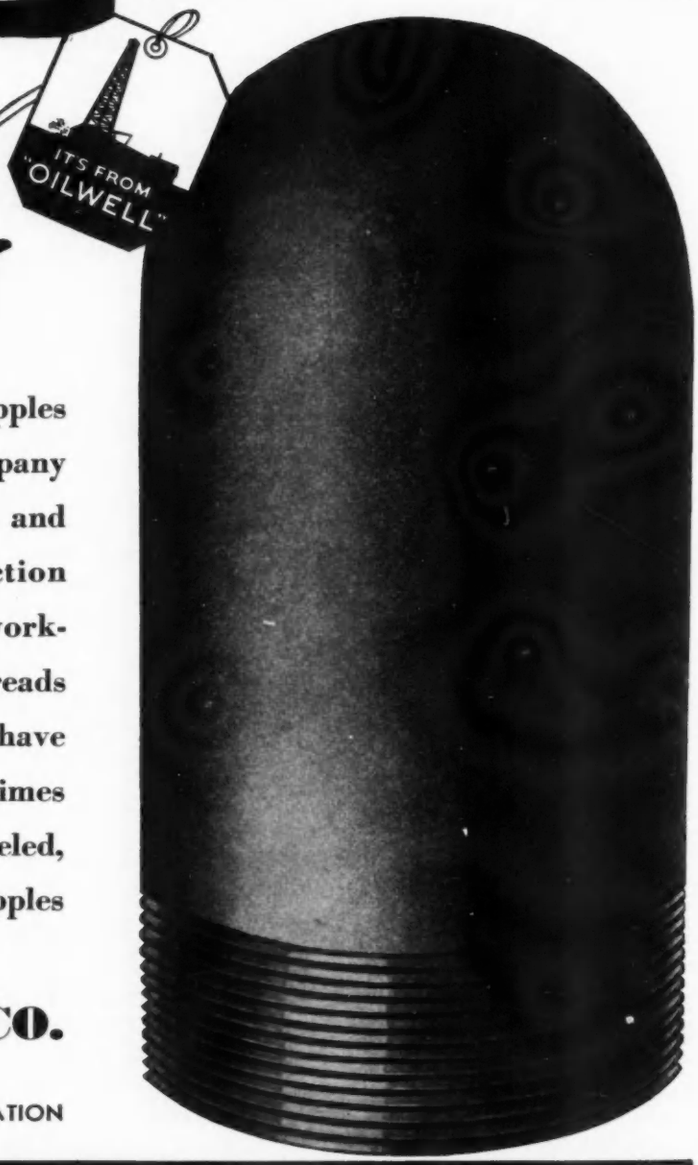

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THE OIL WEEKLY

VOLUME 61, NO. 4 APRIL 10, 1931

American Exporters . . .

YIELD GROUND IN FACE OF

Soviet *and* South American

EXPANSION

By ROY E. LEIGH
Associate Editor

Although dealing with figures for the years 1930 and 1929, one must avoid the impression that the condition treated is of such recent origin. It has been developing for five years; or, to be specific, since the Maracaibo boom got under way in 1925, the opening of Colombian fields in 1926, the commencement of the Soviet Five Year Plan in 1928, and the increase of production in other oil producing countries during the same period.

STATISTICS prepared by the American Petroleum Institute show that America's export trade in crude oil and petroleum products, which heretofore has increased from year to year, including 1929, declined by 6,216,000 barrels, or nearly four per cent, during 1930, this despite conditions of over-supply which obtained in the United States. Our export shipments of oils and refined products, which increased so rapidly as to double in volume during the period 1922 to 1928, fell from 157,768,000 barrels in 1929 to 151,552,000 barrels in 1930. Had the United States enjoyed the usual percentage of the normal increase in the world's consumption of petroleum products, the export trade should have totalled approximately 166,500,000 barrels last year.

It is apparent, from a study of the figures, that this decline is not due solely to depressed economic conditions in foreign countries, but also is due to inroads in our foreign markets made by Russian and South American oils, which began five years ago, the cumulative effect of which became so painfully plain last year. Mexico is the only other oil producing country which suffered with the United States in the loss of export trade in petroleum during 1930. Shipments from Colombia, Trinidad, Peru, Persia, Burmah, and the Netherlands Indies were more or less stable during 1930, in comparison with former years.

The United States is face to face with the unwelcome fact of the first decline in domestic crude consumption and the first reverse in export trade in the history of the industry. Heretofore, with minor and exceptional temporary recessions, both have mounted with pleasing regularity from year to year; but both suffered serious set back in the year 1930.

A. P. I. figures tell the sad tale:

Year	[a]"Indicated Consumption (Domestic and Exports)"	[a]"Exports"	[b]Indicated Domestic Consumption
1927	944,688,000	137,050,000	807,638,000
1928	1,014,607,000	149,360,000	865,247,000
1929	1,103,058,000	157,768,000	945,290,000
1930	1,079,496,000	151,552,000	927,944,000

[a]Original A. P. I. figures; [b]Estimated.

Complete figures are lacking, on export shipments by other oil producing countries; but it is a matter of common knowledge that export shipments from Russia and South America have increased enormously during recent years and it is obvious from the fact of a 30,000,000-barrel increase in foreign production last year that the world's consumption of petroleum did not decline in the aggregate during 1930. This 30,000,000-barrel increase in production on the part of foreign competitors, in fact, accounts largely for the 6,000,000-barrel decline in exports and, in part, for the necessity of the 112,000,000-barrel curtailment of domestic production, domestic consumption having declined

only 17,346,000 barrels during the same period. Imports of crude and refined oils also showed a slight decline from 108,565,000 barrels to 105,510,000 barrels during 1930.

It is interesting to note that, although 43 per cent more oil was exported than imported in 1930, if no oil had been imported at all and had exports been maintained in the same volume as was done, the drastic production curtailment would have been unnecessary; and, at the same time, accumulated stocks could have been reduced by 16,847,000 barrels during the year. This, of course, is a vain speculation, as oil barred from the United States would have found a market elsewhere, displacing approximately an equal volume of export sales and thus throwing the surplus back onto domestic markets.

Imports were increased by 30 per cent, while exports increased only 17 per cent during this critical five-year period in the petroleum history of the United States.

Story Not All Told

Unfortunately, the whole of the story of declining exports has not yet been told. Figures published by the United States Bureau of Mines indicate that export shipments of crude and refined products during the first two months of the present year show a further decline of 15½ per cent in comparison with the same period of last year; and, unless conditions should improve more than can be foreseen, it is likely that further losses will be sustained in 1931.

South American, Near Eastern, Burmese, and East Indian production was stabilized during 1929-1930; but the Soviets, on whom Sir Henri Deterding recently laid the blame for the impossibility of stabilizing world markets, have announced further and greater increases in their production plans.[1] Russian production was increased by 50 per cent during 1929-1930; and latest announcements from Moscow state that production for the current year will approximate 198,000,000 barrels, or about 65,500,000 barrels more than last year. A very large percentage of this ever-growing total will be sent into foreign markets, the private citizenry of Russia being denied the use of petroleum, thus displacing oils formerly supplied by America. Of course, exporters do not bear the whole weight of this Russian onslaught, as it is probably true that European companies producing oil in South America, Roumania, Persia, Burmah, and the East Indies suffer proportionately as much or more than does the United States in the loss of foreign sales outlets; but, with the increase of consumption having been arrested by the economic depression, the realization that the increase of Russian exports bears a direct relationship to the decrease of American foreign sales cannot be avoided.

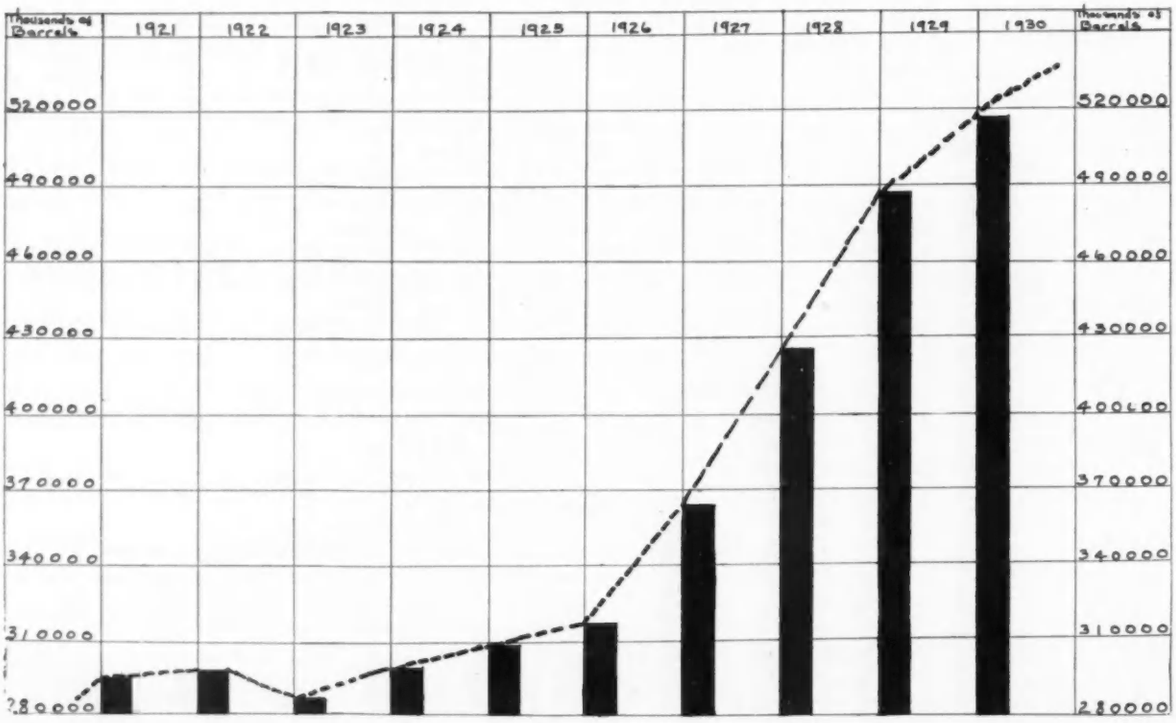
Ebb and Flow of Economic Tides

A study of the details of the export trade in 1930, from statistics collected by the minerals division of the Bureau of Foreign and Domestic Commerce, shows that U. S. losses occurred in the crude oil, kerosene, gas and fuel oil, and lubricating divisions. The only notable increase occurred in export sale of gasoline, shipments having been boosted from 57,349,000 barrels in 1929 to 63,195,000 barrels in 1930. Substantial increases were registered in U. S. sales of gasoline to the United Kingdom, France, Germany, Belgium, Spain, Japan, South Africa, Cuba, and the West Indies. Losses occurred in U. S. sales of gasoline to Canada, Australia, Argentina, Sweden, Denmark, and Italy. The decrease in imports of gasoline by Canada is doubtless due to the imposition of the Canadian tariff. Sales losses in Australia, Italy, Sweden, and Denmark probably were due to expansion in the distribution of Soviet oils. No doubt normal percentages of increase were similarly cut down in Western Europe where the United States nevertheless enjoyed slight increases in volume. Argentina suffered a revolution and, doubtless, decreased her total imports while at the same time increasing the percentage of her purchases from Venezuela, Peru, and other South American oil producing countries at the expense of our exports.

(*Continued on page 60*)

[1]See The Oil Weekly of April 3, 1931; page 48.

Foreign Oil Production Curve—1921-1930



Domestic *and* Foreign Demand Below Last Year

By H. J. STRUTH
Staff Economist

BUREAU of Mines figures for February reveal a decline in both domestic and foreign consumption of petroleum and its products in comparison with last year. The decline, however, is confined principally to crude petroleum and kerosene; the demand for other products having shown a gain over last year. Total consumption of gasoline, domestic and foreign, for the first two months of this year also showed a decline under last year of 1,181,000 barrels, although domestic gasoline consumption for that period was somewhat larger than for the same period in 1930. In fact, there was a gain in domestic gasoline consumption in this period over last year of 725,000 barrels. Compared with estimated gasoline demand for this year,* actual consumption for the first two months was 232,000 barrels above the predicted rate of domestic and foreign consumption. Domestic consumption, alone, was actually 2,822,000 barrels above estimated requirements. Following is a summary of estimated and actual gasoline demand for the first two months of this year:

Total Gasoline Consumption

1931	Estimated	Actual	Actual—1930
January	30,876,000	31,747,000	31,189,000
February	30,378,000	29,739,000	31,349,000
Cumulative	61,254,000	61,486,000	62,538,000

Production of crude petroleum in February amounted to 60,645,000 barrels, a daily average of 2,166,000 barrels, a gain over January of 37,000 barrels daily. This was the first increase reported since May, 1930. Compared with last year, the barometer shows that crude production is about 18 per cent lower; production in February, 1930, averaged 2,610,000 barrels daily.

All Stocks Reduced

Stocks of all oils were further reduced during February to the extent of 3,472,000 barrels, while a comparison with the same period of last year shows that there has been a decline in stocks of 41,072,000 barrels. Crude stocks, east of California are now 25,469,000 barrels below the quantity in storage at this time last year, while California crude stocks are 9,887,000 barrels under the quantity in storage last year. During February, total crude stocks declined 4,766,000 barrels, most of the decline being recorded in stocks held in the territory east of California. California crude stocks declined only 664,000 barrels.

Refinery crude runs to stills were slightly increased during February, the daily average showing a gain for the month of 71,000 barrels, although the total was slightly less than for January because of the fact that February was a short month. The cumulative rate of runs to stills for the first two months of this year, compared with last year, shows a net decline of 17,302,000 barrels. It will be noted that the yield of gasoline from crude run through stills grows constantly larger. In February the average yield was 43.27 per cent, compared with 42.08 in January. This constant increase in gasoline yield is a vital factor in determining the normal demand for crude and has materially influenced the decline in demand for crude by refiners during recent months.

Both crude and refined oil prices have continued to decline and reached a very low point in February, compared with last year. The average posted price of Mid-Continent crude during February was 95 cents a barrel, compared with $1.20 a barrel last February. Subsequent developments have brought the price of 36 gravity crude down to only 59 cents a barrel, a decline of 61 cents a barrel under prices prevailing at this time last year. U. S. motor gasoline is now 38 per cent below prices prevailing at this time last year. The combined price barometer shows a slump in market values of about 30 per cent below last year.

Drilling Has Subsided

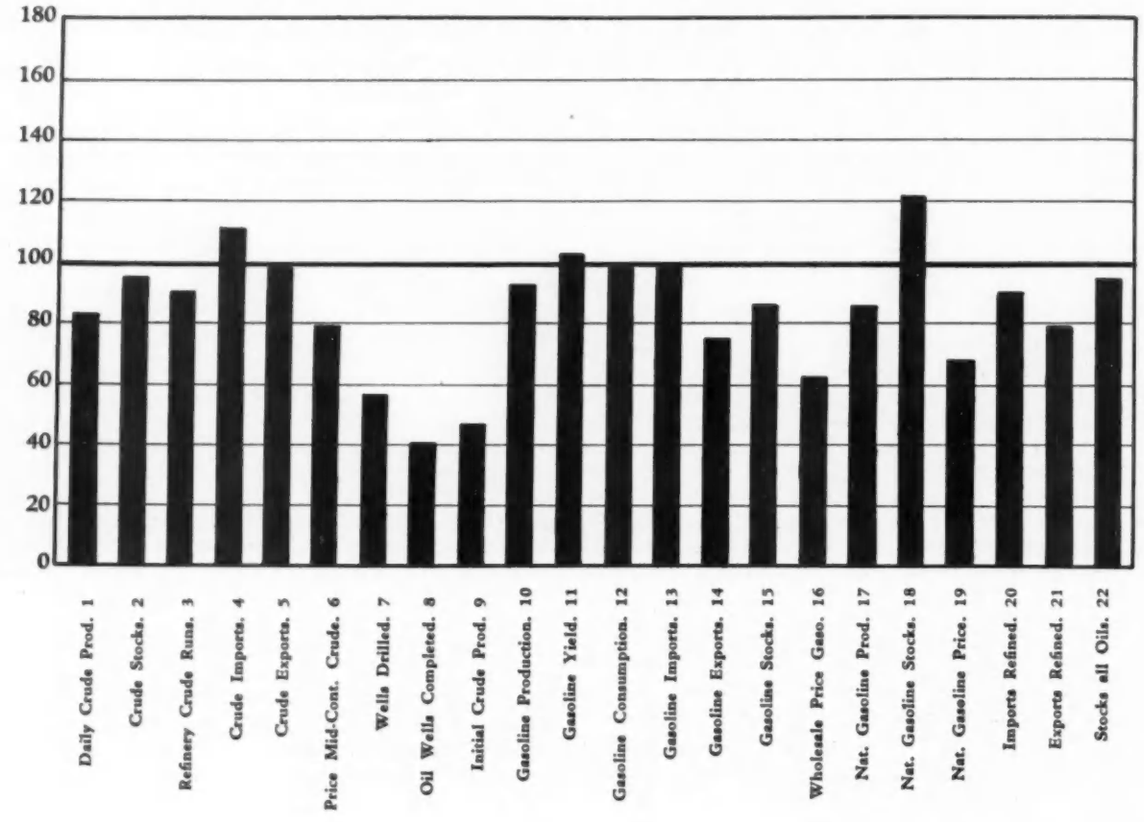
Drilling has subsided to a very low ebb and new production has been materially reduced. The barometer chart has undergone a material change during the past two months and no longer shows excessive indicators protruding above the 100 line. This is construed as a favorable turn for the industry and offers evidence that the worst of the depression has been seen. In fact, with production maintained below actual demand and assurance at hand that imports of foreign crude and petroleum products will be drastically curtailed, it begins to look as though the future holds a ray of hope for the producer. Nevertheless, the situation in East Texas must still be reckoned with and will undoubtedly prove a deterrent to market improvement in the near future. That it will become more and more difficult to prevent an overproduction of crude is apparent from the rate at which new production is being obtained in East Texas. The fact remains that the demand for crude in the United States is not expected to exceed 2,328,000 barrels a day during 1931 and unless other sections of the country are willing to hold back production equivalent to that which is rapidly piling up an excess in East Texas, there is bound to be another period of over-production for the United States as a whole.

In the final analysis, price will dictate the final outcome of the oil situation. Even now, prices, in many instances, are below actual cost of production and the result has been to discourage new development over a large part of the country. With new developments curtailed by necessity, except in East Texas, and many producers faced with a virtual shut-down of non-profitable operations, it will not take very long to bring about an economic adjustment of conditions. In the meantime, East Texas is producing unrestricted and dissipating the life of its producing horizon. Much depends upon whether operators in East Texas are willing to compromise on proration.

*Detailed analysis of probable domestic and foreign gasoline demand for 1931, The Oil Weekly, January 30, 1931, page 55.

(See Barometer on Next Page Please)

Salient Oil Industry Factors for February, 1931, Expressed in Per Cent of February, 1930. Heavy Line (100) Represent February, 1930



Oil Industry Barometer—February, 1931

Index of Salient Factors—Current and Cumulative

	Factors—	This Month			2 Months Ending Feb. 28		
		Last Year	This Year	Index (a)	Last Year	This Year	Index (a)
1	Daily Average Crude Production (Thous. Bbls.)	2,652	2,166	82	2,610	2,146	82
2	Total Crude Stocks (Thou. Bbls.)	539,336	503,980	93	539,336	503,980	93
3	Refinery Crude Runs (Thous. Bbls.)	72,414	65,249	90	152,577	135,275	89
4	Crude Imports (Thous. Bbls.)	4,321	4,789	111	9,771	9,142	94
5	Crude Exports (Thous. Bbls.)	1,731	1,710	99	3,539	3,629	103
6	Posted Price 36 Gravity Mid-Cont. Crude (Per Bbl.)	$1.20	$.95	79	$1.26(b)	$.95(b)	75
7	Wells Drilled*	1,463	815	56	3,381	1,971	58
8	Oil Wells Completed*	881	348	40	2,023	867	43
9	Initial Crude Production (Thous. Bbls.)*	991	460	46	1,676	1,257	75
10	Gasoline Production (Thous. Bbls.)	33,949	31,328	92	70,603	64,036	91
11	Gasoline Yield—Average Per Cent of Crude (d)	42.02	43.27	103	41.50	42.64	103
12	Domestic Gasoline Consumption (Thous. Bbls.)	26,509	26,133	99	52,252	52,977	101
13	Gasoline Imports (Thous. Bbls.)	953	948	99	2,032	2,064	102
14	Gasoline Exports (Thous. Bbls.)	4,840	3,606	75	10,415	8,509	82
15	Gasoline Stocks at Refineries (Thous. Bbls.)	53,229	45,355	85	53,229	45,355	85
16	Refinery Price U. S. Motor Gaso.—Group 3 (Cents)	6½	4	62	6¾(c)	4⅛(c)	61
17	Natural Gasoline Production (Thous. Bbls.)	4,248	3,631	85	8,658	7,771	90
18	Natural Gasoline Stocks (Thous. Bbls.)	572	692	121	572	692	121
19	Price Grade "A" Natural Gasoline, Group 3 (Cents)	5½	3¾	68	5⅜(c)	3⅝(c)	67
20	Imports of All Refined Oils (Thou. Bbls.)	3,224	2,917	90	7,030	6,518	93
21	Exports of All Refined Oils (Thou. Bbls.)	10,123	7,992	79	22,160	18,083	82
22	Total Stocks of All Oils (Thous. Bbls.)	699,377	658,285	94	699,377	658,285	94
	Weighted Index of Supply	.....	.....	92	.....	.....	94
	Weighted Index of Demand	.....	.....	88	.....	.....	71
	Weighted Index of Prices	.....	.....	70	.....	.....	68

*Exclusive of Rocky Mountains. (a)—Last Year—100.
(b)—Weighted Average. (c)—Monthly Average.
(d)—Straight run and cracked gasoline only.

East Texas Yield Expected to Exceed Billion Barrels

Recent developments strengthen theory that Joiner, Kilgore and Longview will connect to result in single 85,000-acre pool

By JACK LOGAN
Staff Representative

SIGNIFICANT field developments in Rusk and Gregg Counties during the past few weeks have resulted in the first full realization of the immensity of the new East Texas oil field. Recognized authorities now concede it to be one of the greatest fields ever discovered, both from the standpoint of productive area and with respect to recoverable oil.

Present evidence leaves very little doubt as to the eventual merging of the Joiner, Kilgore and Longview pools into one vast, continuous field, at least 30 miles long, and with maximum width of at least five miles, as indicated roughly on the accompanying map. Recent extensions strengthening the theory that the three fields will connect will be discussed later in this article.

If these present strong indications materialize, the field will have at least 85,000 productive acres—an area greater than the combined productive areas of Yates, Hendrick, Kettleman Hills, Oklahoma City, Van, Hobbs, Mexia, and Refugio, all of which are relatively large fields.

The recovery per acre in the East Texas field will unquestionably be very low as compared with production per acre in such prolific pools as Yates and Kettleman Hills, but the East Texas area is conservatively conceded an ultimate recovery of at least 15,000 barrels per acre. It is tentatively calculated, therefore, that the ultimate recovery of the whole field will be at least 1,275,000,000 barrels. This estimate, furthermore, does not take into consideration possible north, south and west extensions of the area now regarded as virtually proven, the limits on those sides being neither proved nor disproved beyond present producing wells.

The only other field in the United States heretofore seriously classed as a "billion-barrel" pool has been Kettleman Hills. Estimates of ultimate recovery there range from 50,000 barrels to 100,000 barrels (or even more) per acre, due to limited information regarding the oil sand, and productive area is around 16,000 acres, exclusive of the "South Dome," which is now believed part of another structure. (See THE OIL WEEKLY, January 16, 1931). The ultimate recovery is consequently placed at 800,000,000 barrels, according to the more conservative estimate, and at 1,600,000,000 barrels under the more liberal estimate.

Yates field in West Texas has heretofore been credited with a reserve exceeded by no other except possibly Kettleman Hills. At Yates there are 15,000 productive acres, and allowing ultimate recovery of 50,000 barrels per acre, a liberal estimate, the total yield will be 750,000,000 barrels.

The Oklahoma City pool has 10,000 productive acres, and ultimate recovery is variously estimated at 10,000 barrels per acre to 25,000 barrels. Figuring as much as 20,000 barrels per acre, a fair estimate, according to various authorities, the recovery will be 200,000,000 barrels.

Van field with 4000 productive acres is expected to yield from 25,000 to 40,000 barrels per acre, or about the same amount as the fields of the Mexia-Corsicana area. The ultimate recovery, consequently, is estimated at 100,000,000 to 160,000,000 barrels.

Rusk-Gregg Estimate

As in other fields, the estimates of ultimate recovery in the new Rusk-Gregg County field vary, the usual estimates ranging from 10,000 barrels per acre to 25,000 barrels. Nearly all authoritative opinion, however, concedes an ultimate recovery of at least 15,000 barrels per acre, the figure used above. Should revision of this estimate be necessary, it will more likely be increased rather than decreased. For the early estimates have been based largely upon data and conditions revealed in the older wells, located in the east portions of the productive territory. Wells which have extended the field westward have had greater thicknesses of oil sand, and have consequently registered higher initial production. It appears, therefore, that the most prolific area remains yet to be drilled. Furthermore, the western boundary of the productive area has not yet been determined, and with the sand thickness increasing toward the west, each future extension which may be made in that direction is likely to increase the average per acre yield of the field.

Similarly, if there is to be an alteration in the mentioned estimate of productive area, that is 85,000 acres, it may be revised upward. For despite the great extent which it has already attained, the field has not yet been defined on the north and south ends, nor on the west edge. The east side, where the oil sand pinches out, is therefore the only known limit.

Although it has narrowed on the north end in Gregg County and may be near the deadline, there is as yet no certainty. Instead of coming to an end, it is possible that the field may continue on to the north with reduced width, or even that it may again widen out.

On the south end in the Joiner area, Rusk County, the field is 5½ miles wide, and as in the northern portion of the field only future drilling can determine how much farther production will extend. It may continue on for several, or many miles, there being no dry holes to con-

demn that southern area. It is fairly sure to extend at least a few miles farther south. As to which direction it will follow, there is likewise no certainty. Contours on tops of chalks above the oil sand swing westward in the region of the present southern limits of the Joiner pool, and then swing back, indicating the Henderson "nose." It is pointed out by geologists that the production trend may turn southwesterly with that "nose," while it is also conceded that it may cut across the "nose," and continue on south or else southeasterly, parallel with the periphery of the Sabine uplift.

East-West Extent Unknown

Just as there is lack of knowledge as to northern and southern ends of the field, there is also nothing more definite than guesses as to ultimate east-west extent of the productive area. The producing sand, popularly designated as the "Woodbine sand," is generally regarded as having furnished a trap for the oil by virtue of its "pinching out" along an old Cretaceous shore line along the Sabine Uplift between impervious chalk above and lime below. According to this popular theory the sand thickens toward the west as it dips off into the East Texas Basin. The limits of production will not be reached, therefore, according to the accepted theories, until the sand is found far enough in the basin that it will carry salt water instead of oil. How far that will be is conjectural except in the extreme north end of the present Longview area, where Tips DeArmand-Capps et al's Charles Cobb 1, Marshall Mann Survey, Upshur County, tested salt water along with oil and gas. That is the key well indicating that the field will narrow down and possibly end in that vicinity.

In the meantime, however, a generally unforeseen width of the productive area has been indicated somewhat farther south, the Longview pool having an east-west extent of about five miles through coring of oil sand in Selby Oil & Gas Company's P. J. Snaveley 1 near Gladewater. The Joiner pool had been extended westward into Smith County a short time earlier to a total width of 5½ miles through completion of Guy V. Lewis et al's S. S. Cook 1. The producing horizon is at 3675-3696 feet, indicating only a very gradual westward dip of the sand from the east edge of the Joiner pool.

Since the field attained a generally unforeseen width through the five and 5½ mile extensions, there are no ready predictions as to further advancement of the limits toward the west. Theoretically, if it is really the Woodbine formation, the sand will continue dipping westward more or less uniformly to the "bottom" of the East Texas Basin, that is, to the vicinity of Tyler, Smith County, beyond which it begins rising in similar fashion in the western portion of the East Texas Basin. The extent of the producing area of the Rusk-Gregg County fields will depend, therefore, as previously stated upon how far west wells may be drilled without finding salt water in the "Woodbine sand," and consequently upon the rate at which the sand dips downward toward the west. Flattening out or dipping gradually as it apparently does, judging by the depth at which it was found in the Smith County extension well, it is conceivable that the field may attain a considerably greater width than it now has. Something definite should be known before long about the territory beyond the present western limits of production, for plans have been made for several tests in extreme eastern Smith County, including one by Big Indian Oil Company in the J. Love Survey, approximately three miles west of Overton. That well is indicated on the accompanying map.

Luling Oil & Gas Company's Brightwell 1, Kilgore, gauged 780 barrels in one hour, according to owners' estimate, when completed recently at 3630 feet

Eastern Boundary Defined

While the north, south and west limits of the East Texas field are still conjectural, there is already enough information to determine roughly the eastern boundary of the field. Possibilities of production on that side depend simply upon whether or not the oil sand is present, and the pinching out point has been determined in portions of the Joiner, Kilgore and Longview areas through unproductive wells. Those unsuccessful tests are indicated on the accompanying map, and they served as guides in indicating the approximate east limit of the productive area. Some missed the "Woodbine sand" entirely, while others had small thicknesses of the sand with oil and gas showings but would not produce because the sand was too tight. Several miles south of production in the Kilgore area Morefield Drilling Company and Head are drilling a test, J. Ector 1, Daniel Clark Survey, which will contribute toward further outlining the east edge of the field. It has been reported as running structurally high, with possibility consequently of being too far east for production.

The purpose of the accompanying map is to show the Joiner, Kilgore and Longview pools with relation to each other, and also the approximate outline which the field will assume if the three pools merge, as they are now generally expected to do. Such being the object, no attempt is made to show all the wells. There are over 100 producing wells and approximately 400 which are drilling or in some stage preparatory to drilling. The map, therefore, includes only the discovery wells, important extension wells, interesting drilling wells, and dry holes adjacent to production, these being sufficient to show the general outline and trends of the field.

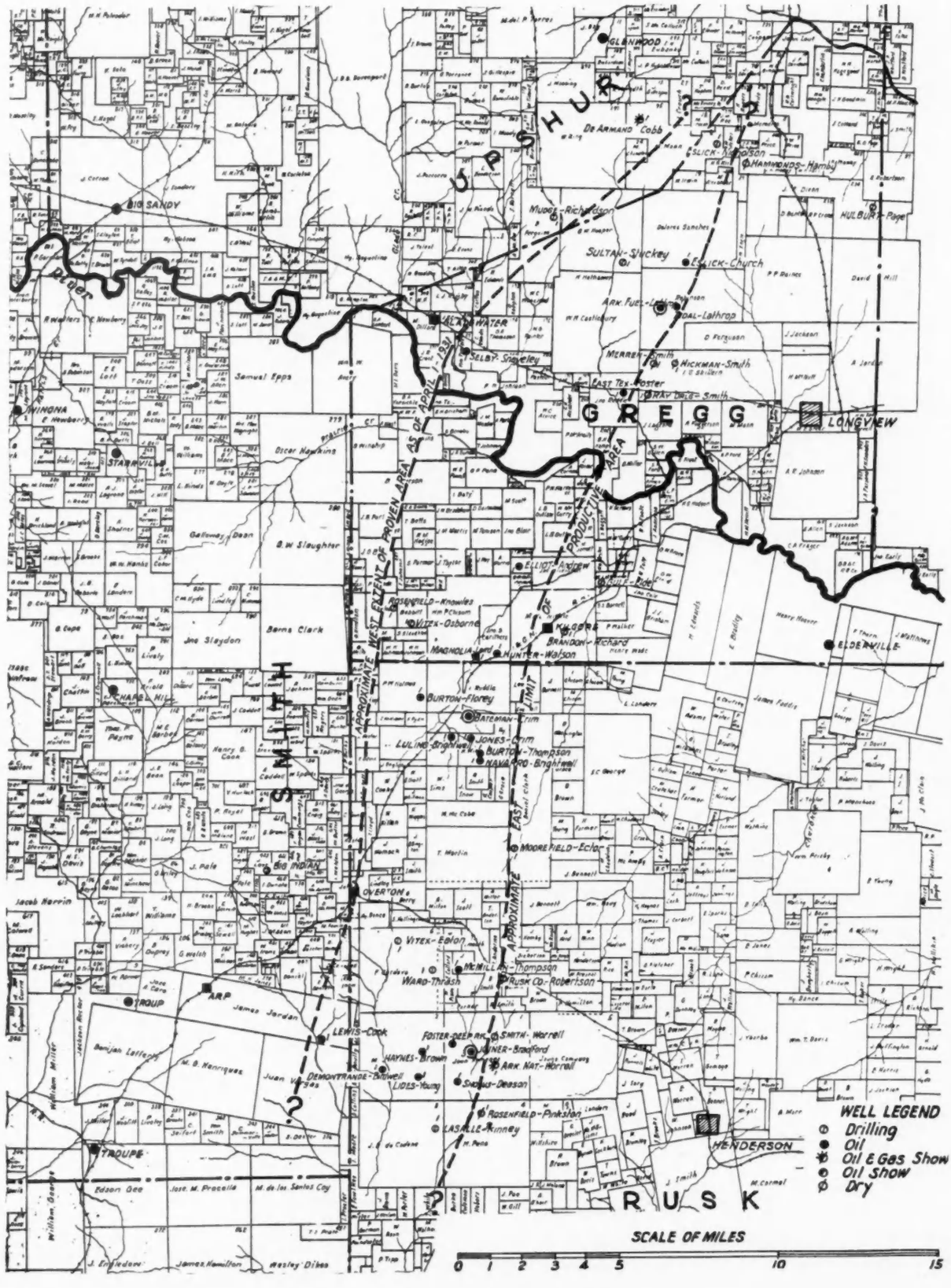
The Joiner area, first to be discovered, is at the southern extremity of the indicated field; Kilgore is the next productive area to the north; and the northernmost productive district is called the Longview pool. From the most southerly producers of the Joiner area to E. E. Eslick-Little et al's Springfield Church 1 in the north end of the Longview field is a distance of approximately 27 miles.

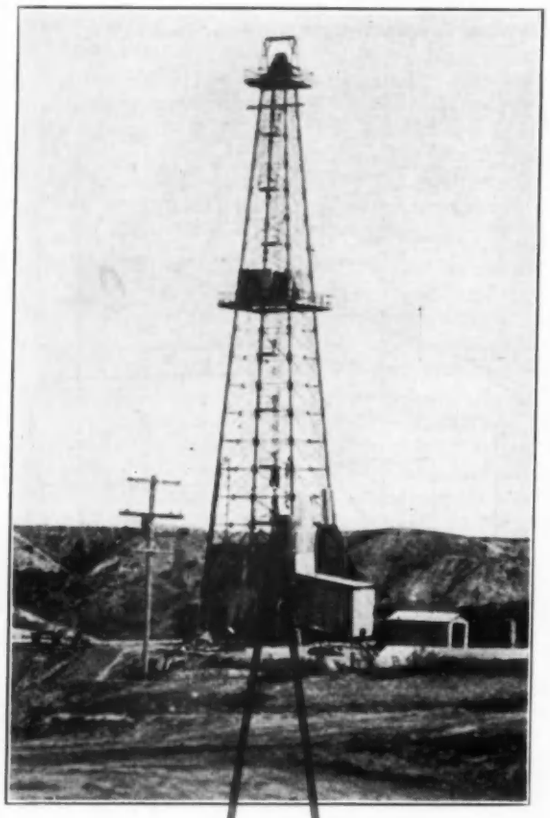
While the dashed lines on the map roughly indicate what is regarded as probable productive territory, only the eastern limit is known (and that only approximately), the oil sand being known to pinch out in the general vicinity of the indicated dashed line. Except where it falls directly between producing wells and dry holes, the line is of course subject to revision, and it may swing westward to considerable extent in places with sub-surface "noses" or it may eventual-

(*Continued on page* 59)

Trend of East Texas Development

Showing possible producing area should Joiner, Kilgore and Longview pools prove one field





The record string of casing set in the Blauvelt well weighs approximately 459,884 pounds, a figure that is impressive enough in itself; but when one considers that it is heavier than a giant steam locomotive one gets a better impression of the immense volume of steel which was handled.

Method Used

By ROY E. LEIGH
Associate Editor

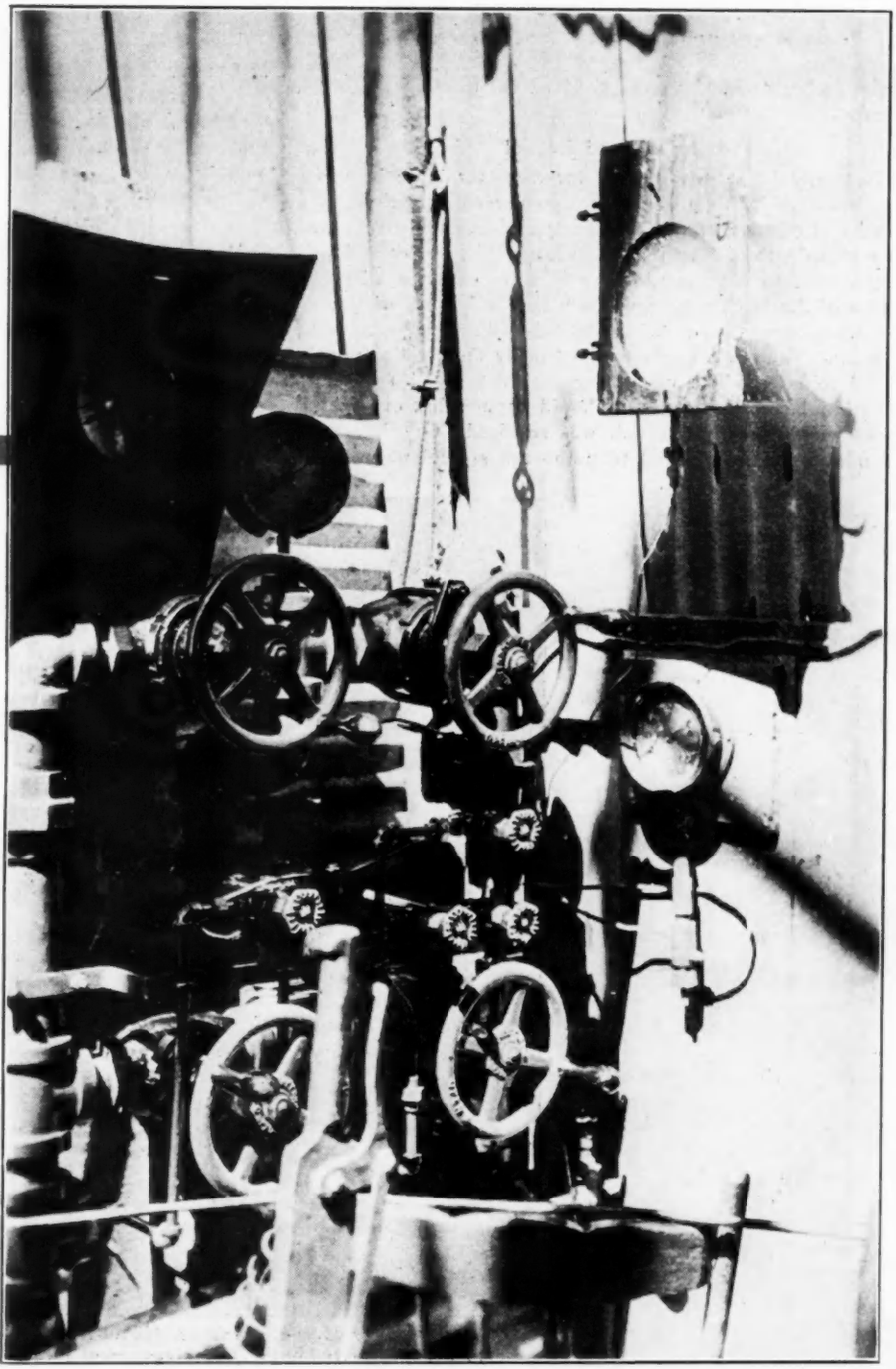
ANOTHER milestone of engineering progress was solidated, of San Francisco, successfully landed and passed during March when North American Oil Concemented more than 1¼ miles of 13⅜-inch casing weighing nearly 500,000 pounds in its Blauvelt well at Kettleman Hills. This achievement chalked up to the credit of A. B. Jenks, general manager; Jack Vaughan, drilling foreman, and E. W. Moon and A. A. Hopkins, drillers, establishes a new world's record for the successful setting of long strings of large diameter pipe.

The necessity for such an unusually long string of casing arose out of the fact that the Blauvelt well is located well down the flank of the North Dome, in Section 36-21-17, where production is expected at around 9000 feet, or about 700 feet deeper than the deepest well in the Kettleman Hills district or, for that matter, in the entire state. As a matter of fact, the key or marker beds have not yet been found; and it is not impossible that this well may ultimately reach a depth of 10,000 feet, establishing also a new world's record for depth. The hole is straight and in good mechanical condition, and the technical management, as well as the manufacturers of the various units of equipment in service on the well, are confident of their ability to carry it down to that depth, barring unforeseen accidents.

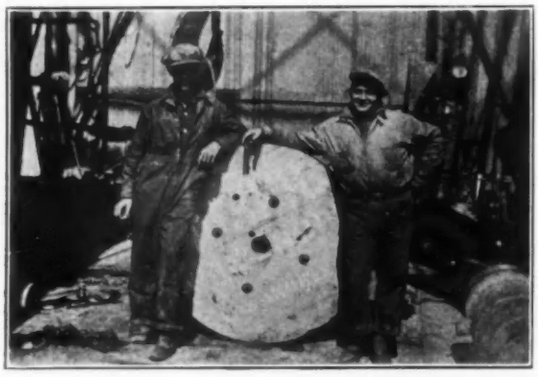
It has been calculated that this string of 13⅜-inch 68-pound pipe weighs approximately 459,884 pounds, a figure that is impressive enough in itself; but when one considers that it is heavier than a three-cylinder mountain type steam locomotive fully loaded with fuel and water one gets a better impression of the immense volume of steel which was successfully lowered in place at a point more than 1¼ miles below the earth's surface. This great weight was suspended by a Byron Jackson Triplex 300-ton hook and B-J side-door slip elevators, a Baash-Ross five-sleeve traveling block and a one-inch by 2500-foot Pacific Super Steel casing line under a 136 feet by 26 feet by five-feet eight-inch Emsco Hi Ten derrick made of special high tensile steel and reinforced with five-inch Hi Ten reinforcing legs and an Emsco eight-sheave double deck crown block. The manufacturers estimate that the capacity of the derrick exceeds the weight of this record string of casing by more than 50 per cent. However, not all of the strain of this mass of weight was actually put on the derrick, as the pipe was floated into the hole with the aid of two Baker cement float collars, which, it is estimated, probably relieved the derrick, hook, line and blocks of approximately 25 per cent of the load. One float valve was placed on bottom of the string and the second was placed in the first collar above the shoe, as a precautionary measure. A Baker cement whirler shoe, with side ports for the establishment of circulation when on bottom, was also used.

The casing was landed on a Shaffer Spool Type Casing Head, from regular stock; and after it was set and cemented a stretch was taken of practically the full weight of the

For Setting Longest String *of* 13 3/8 Inch Casing



Hook-up of indicating and control equipment used on the Blauvelt well.



E. W. Moon and A. A. Hopkins, Drillers, who landed the longest string of 13⅜" casing in the world.

string, whereupon it was packed and cut off flush with the head.

New Speed Record

Not only has a new record for diameter-depth been set up, but also in all probability a new record of time consumed in running in and cementing casing. The string was run to a depth of 6766 feet in 18 hours 45 minutes and was lifted back to 6763 feet, where it was cemented with 850 sacks of Santa Cruz cement, including 425 sacks of special oil well cement and 425 sacks of ordinary construction cement. The cement was pumped in by the Perkins people in 33 minutes. The cementing contractor had two units on the job, in case anything should happen, but everything went well and only one unit was required. One hour and 30 minutes were required to pump the second plug down, and it took 775 pounds to land it. Circulation broke at 350 pounds and was maintained at 200 pounds. When the plug was drilled, only 38 feet of cement was found inside the pipe.

Conductor pipe of 18⅝-inch diameter weighing 84½ pounds per foot was set in 27-inch hole at 1381 feet, where the hole was reduced to 17½ inches, which diameter was maintained until the depth of 6766 feet was reached. Both strings of pipe were furnished by American Seamless Tube Corporation of California and were manufactured in Germany according to the specifications of the American Petroleum Institute. The record string was made of Grade "D" seamless steel conforming to the A. P. I. standards, which call for a minimum tensile strength of 95,000 pounds per square inch and a minimum yield point of 55,000 pounds per square inch. The joints averaged 42 feet in length, which materially reduced the number of joints to be made up and lessened the time required for running the string in the hole.

It is reported by the management that the third string will be of nine-inch diameter and will be set at approximately 8400 feet, which, if the job is completed with equal success, will also set up a new world's record for pipe of that diameter.

Maximum Depth Unknown

Manufacturers whose equipment was used on this particular job agree that the maximum depth at which it may be possible to set casing of this diameter and weight has not yet been reached. Taking a length or depth of 10,000 feet as an arbitrary mark to shoot at, that being the figure which is on operators' lips nowadays, one finds that such a string of 13⅜-inch casing would weigh 680,000 pounds, a weight which is well within the capacity of the derrick, estimated at 745,000 pounds, not counting the large per-

W. R. ("Frosty") Martin, President, Martin-Decker Corporation, inspects Martin-Decker equipment used on the North American job.

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OF THE PETROLEUM INDUSTRY
THROUGH MORE THAN TWO DECADES
OF SUPERIOR PERFORMANCE
AND EMINENTLY
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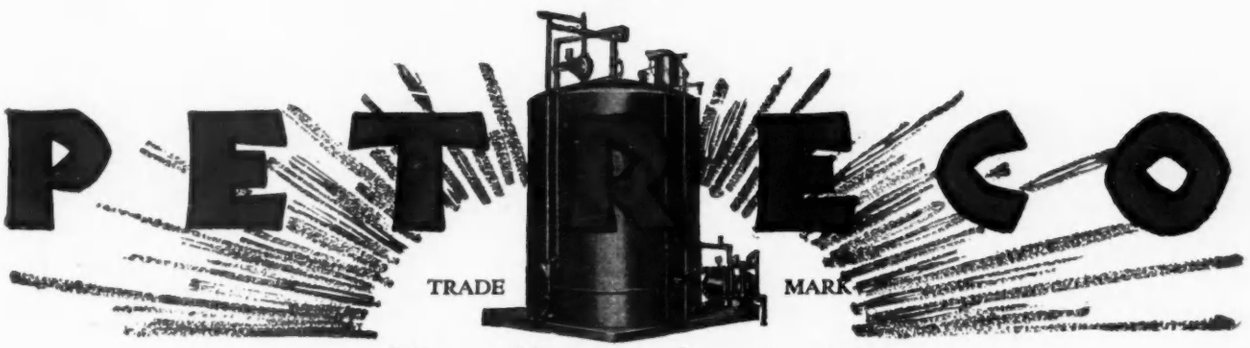

Fully covered by process and apparatus patents

"The Petreco Process for the Electrical Dehydration of Crude Oil Emulsions" — illustrated Bulletin No. 30-3, containing complete information — will be forwarded to any responsible oil company on request.

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centage of relief afforded by the float collar. Assuming that the floating-in process would lighten the load by 25 per cent, one finds that the unrelieved tensile strain on the pipe would approximate 510,000 pounds; or, in other words, the pipe would be carrying only 510,000 pounds or (50,000 pounds divided by 68 pounds per foot) 7500 feet of its own weight. References show that pipe of this specification will sustain its own weight up to a length of 7545 feet (the length of string equivalent to tensile strength of joint). The B-J hook made to handle 600,000 pounds has survived laboratory and field tests of 1,000,000 pounds and the other equipment is equally sturdy.

The straightness of the hole in which the casing was run was one of the most important factors contributing to the success of the job. It was surveyed repeatedly, and the maximum deviation from perpendicular was found to be less than two degrees, the average being something less than one. In other words, it might be said that the hole is almost absolutely straight, which permitted the casing to be floated down without lodgment. The pipe was free in the 17½-inch hole at all times, and was readily lifted after having reached bottom.

The well was drilled with a Doheny Stone Hydril hydraulic rotary outfit, in which the weight of the drilling string was supported by the hydraulic table and the weight on the cutting edge of the bit was constantly observed, maintained and recorded. The observation and recording of the drilling pressure was done by means of a combination of Martin-Decker and Drillometer indicating and recording equipment. The pump pressure was indicated and recorded by Martin-Decker equipment, as was also the action of the hydraulic rotary table.

The Hydril hoisting equipment was fitted with American brake blocks, which, according to the drillers, gave very satisfactory service and lasted well under the severe strain imposed. It is interesting to note that the last 1000 feet of casing was run in with the draw works in gear, the drillers using the braking action of the compression of the three-cylinder steam engine in the same manner as the low or intermediate gears on automobiles are employed by motorists in descending steep hills.

Other equipment employed on this remarkable job included a string of six-inch, 25-pound, special alloy, high tensile drill pipe made by National Tube Company, a flexible steel hose made by Oil Well Manufacturing Company, Union Tool and Gardner-Denver slush pumps, a Titusville Acme 7¼ by 16 by 7¼ high pressure pump, and patent bits made by Zublin, Spartan Steel, Baash-Ross, Byron Jackson, and Guiberson.

Vacuum Sets Gulf Coast Casing Record at Lockport

VACUUM Oil Company has established a Gulf Coast record for setting of large diameter casing by its success in landing and cementing 6498 feet of 9⅝-inch 40-pound pipe in its Bordages 9 in the Lockhart field, near Lake Charles, Louisiana. As a matter of fact, this achievement approaches very near to the world's record; but references show that Big Lake Oil Company set 6970 feet of nine-inch casing weighing 45 pounds per foot in its 1-C well in the Big Lake field, Reagan County, Texas. The best California records for pipe of these diameters are credited to Continental Oil Company, with 6095 feet of 9⅝-inch at Seal Beach, and Standard Oil Company of California, with 6350 feet of nine-inch set in the Midway-Sunset field.

Vacuum Oil Company's job nevertheless represents a remarkable engineering accomplishment, as it was done with an ensemble of equipment designed for drilling only to depths of 5000 to 6000 feet. Several of its units have greater capacities, but the rig as a whole was assembled for 5000-foot drilling. This equipment was re-enforced wherever possible, as a measure of precaution; but no mishap or failure occurred and the job went forward with clock-like regularity from start to finish.

The derrick, an Emsco 122 by 24-foot Hi Ten, was re-enforced with relegs made of 4½-inch drill pipe; and the 9⅝-inch Butler slip elevators were re-enforced by welding cross-bars in between the bails. It was necessary to string up 10 lines to handle the 130-ton load, an L-sheave block being installed just above the four-sheave traveling block. The casing was floated in by means of a Baker float collar, and the pipe was filled with fluid at 1500-foot intervals to guard against collapsing pressure.

The casing was 9⅝-inch 40-pound Grade D Pittsburgh Seamless Steel, and the whole string weighed approximately 260,000 pounds. The weight applied to the bit while drilling was controlled by means of Martin-Decker indicating and recording gauges; and the hole, which was surveyed at frequent intervals, was found to have a maximum deviation of only three degrees from perpendicular, with an average of only slightly more than one degree. Other equipment used included an Ideco-Boykin "Big Texan" draw works, an Oil Well "Imperial" rotary, Ideal 14 by 7¼ by 14 slush pumps, two 100 horsepower National boilers, a twin-cylinder 12 by 12 Ideal Oil Bath engine, a five-sheave Beaumont Iron Works crown block, a four-sheave Ideco-Boykin travelling block, and a one-inch six by 19 Broderick & Bascom casing line.

The job was planned, managed, and executed by W. C. Thomas, manager of the producing and drilling department, and L. A. Bell, district superintendent, both of Houston, and O. H. Eichelberger, field superintendent, John Bozeman, drilling foreman, and Allie Purwell and J. J. Sutton, drillers, all of Lockport.

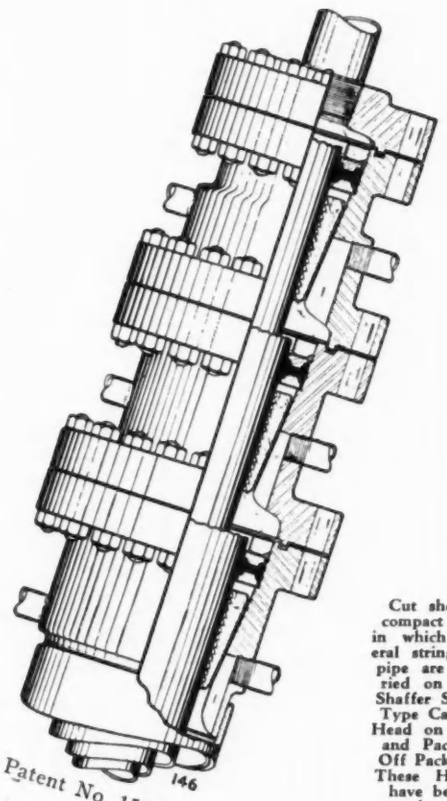
The WORLD'S HEAVIEST string of casing was landed with SHAFFER SPOOL TYPE CASING HEAD

North American Consolidated Oil Co. Blauvett No. 1 Kettleman Hills Depths 6763' 13⅜" Casing Weighing 462,000 Lbs.

The Shaffer Spool Type Casing Head was used in landing this string.

After casing was set and cemented a stretch was taken of practically the full weight of the string. The casing was landed on the slips and head. Then it was packed and cut off flush with the head and the job was complete. There was no cutting off of nipples nor backing off of joints which eliminated the attendant danger of such operations on such a heavy string. Because of the tremendous weight involved it is doubtful whether it would have been safe to release the string of pipe on bottom for any other type of connection.

The Shaffer Spool Type Casing Head which was used on this job was a regular stock head made in the Shaffer plant at Brea, California. Shaffer Tool Works was not advised that a record breaking string of pipe was to be landed. This is another evidence of the superior qualities of Shaffer Equipment. Every well drilling in Kettleman Hills is using Shaffer Tools.



Cut shows compact way in which several strings of pipe are carried on the Shaffer Spool Type Casing Head on slips and Packed Off Packing. These Heads have been tested up to 5000 lbs. pressure around 9" Casing.

SHAFFER TOOL WORKS

Brea, California

OKLAHOMA CITY—
Fluid Packed Pump Co.
Mid-Continent

HOUSTON—Robt. J. Miller Co.
FOREIGN—Oil Well Supply Co.

SHAFFER SPOOL TYPE CASING HEAD

WORLD PETROLEUM IN REVIEW

Gasoline Imports Bring Controversy

Mexico City.—Import of gasoline into this country from South America has given rise to considerable controversy between the importers and the Mexican producing companies. Mexican Eagle Oil Company recently made a statement that the government should take measures to halt these imports. According to the Ministry of Finance the gasoline and importation levies will net the government approximately $7,500,000 this year.

Official figures for the year show that 27.6 per cent of the gasoline consumed in Mexico was imported. Most of these imports were by American companies, Standard Oil Company of California being one of the largest importers of gasoline. Venezuela has recently imported a large amount of gasoline into this country, the consignments coming from the Huasteca Petroleum Company.

Parma Province Claims Gusher

Rome. Italy. — Current reports are to the effect that a gusher has been hit in the Fontevivo field, near Parma. There are several natural gas wells in the western part of Parma Province. The reported oil came from one of the gas wells in this field. The oil has been described as of relatively low gravity and yellowish and of a very high grade. High pressure in the well is indicative of a considerable deposit of oil in the sand, although the first indications cannot be regarded as positive.

Government Fixes Import Duties

Buenos Aires, Argentina. — A law passed by the legislature February 23 removes petroleum fuel from the free list and fixes duties for these products at five per cent of the c. i. f. Buenos Aires valuation. This classification includes fuel oil with a minimum density of 0.9 at 15 degrees Centigrade, petroleum residue and gas oil which distills less than 20 per cent of its volume up to 300 degrees, or whose products of distillation may have a density greater than 0.830.

New Zealand Wells Active

Wellington, New Zealand.—Oil has found after passing the 2300-foot level by one of the four companies operating in the vicinity of New Plymouth. The extent of production has not been determined however since a number of wells during the past few years have been drilled into productive sands between the 2000 and 3000-foot levels in this territory without ever establishing definite commercial production. The search for oil continues to center around this area.

A new location has been made by Motorua Oilfields, Ltd., and a small amount of oil has been obtained by bailing. New Plymouth Oil Wells Company is continuing its search for production in the field and the Blenheim Company is renewing its drilling campaign. Over 40 prospective tests have been sunk in North Taranaki, but all the oil recovered so far has come from a coastal strip between New Plymouth and its harbor.

Government Requires Company Reports

Lima, Peru.—In order that more accurate checks may be kept on all companies operating in this country it has been necessary to pass certain measures requiring companies to make reports of personnel and all activities. A decree effective in September, 1930, required all companies to employ at least one Peruvian engineer in every mining camp. In October a decree was rendered effective requiring all companies to inform the Director of Petroleum Mining of all details of their organizations and operation. The companies are also compelled to furnish an annual and detailed statement of any changes or transfers.

A resolution was passed in December requiring the companies to submit written monthly reports of the amount of crude oil and crude products producer. These reports are used in the collection of petroleum taxes.

February Production Estimates Decline

Mexico City.—A continuation of the decline in the production of petroleum is shown in the estimates for February. Output has been given by the Ministry of Industry, Commerce and Labor as 2,563,968 barrels, a daily average of 91,570 barrels. Total production for January has been placed at 2,890,903 barrels, an average daily production of 93,255 barrels.

Persian Exploration Activities Increase

Teheran, Persia. — Activities of a French-Swiss group in the northern province of Mazenderan consisted of geological surveys and experimental drilling, the work being conducted as a measure for assisting Kevir Khourian Company which has for some years been drilling unsuccessful tests near Semman. An oil concession was reported signed by an American company and drilling equipment has been moved to the location. An American financial group representative has been conducting negotiations for a concession in the Caspian Province. The district between Kermanshah and Khaniquin is said to have been the scene of oil discoveries by Anglo-Persian engineers early in the year. In December oil was reported discovered on the steppes of Moghan in the Province of Zzerbaijan.

Dutch East Indies Exploitation Concession

Brunei, Borneo. — The Dutch government has been authorized to conclude agreements for concessions to prospect for exploit oil in certain specified areas in the Dutch East Indies. Nederlandsche Koloniale Petroleum Maatschappij and the Bataafsche Petroleum Maatschappij will be the companies to exploit the territories outlined by the government. Fifteen areas are to be allotted to the Batavian and six areas will be allotted the Koloniale Company.

Creole Petroleum Manager Wed

Maracaibo, Venezuela.—Harold I. Fry, assistant manager of the Creole Petroleum Corporation, was married to Miss Laura C. Clark in this city March 9, 1931. Mr. Fry has been associated with the subsidiaries of Standard Oil Company of New Jersey in Venezuela for the past 10 years and is now in charge of production activities for Creole Petroleum Corporation at Punta de Leiva.

Embargo Placed On Soviet Oils

Bucharest, Roumania.—According to recent reports the government economic committee has refused to grant any further permission for the entry of Russian oil imports into Roumanian harbors. This embargo has been placed as the result of a decision that such imports are exported for dumping purposes.

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Introduced only a few months ago, W-K-M *Full-Automatic* Elevators have already established their superiority. The smooth, quick-snapping latch, operated by leverage with the right handle, is the reason for it!

Try out the new elevator. Learn why it's the talk of the industry! You'll find that latch-handle, to which the arrow points, the greatest convenience ever developed! Push against it and watch the elevator open its jaws. Bring the handles together, then, and watch the jaws snap shut.

There are numerous other advantages—the strong, rugged latch; the alloy steel hinge-pins and latch-pins; the big, convenient handles; the electro-plated castings, and *still* others!

Full details are given in our Pamphlet No. 605. Write for it today. It will give you new ideas of speed and easy operation.

ABOVE — Elevator immediately after it has been opened. Note position of right handle.

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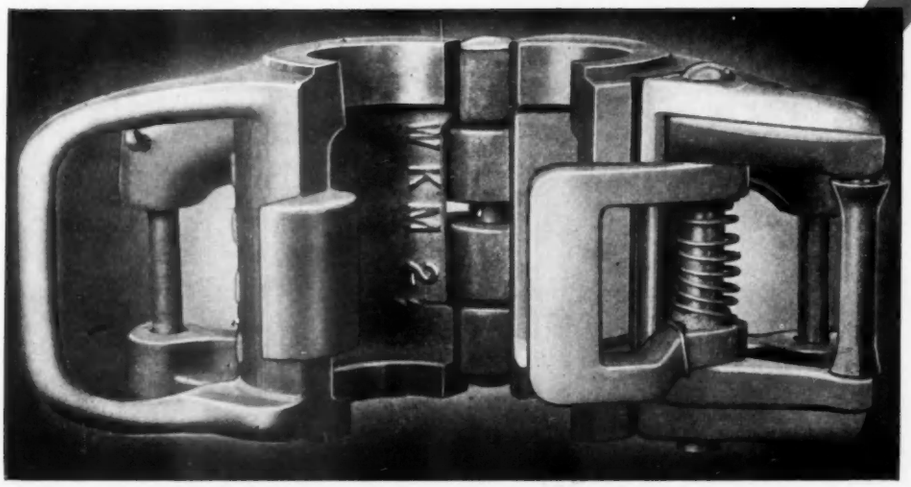
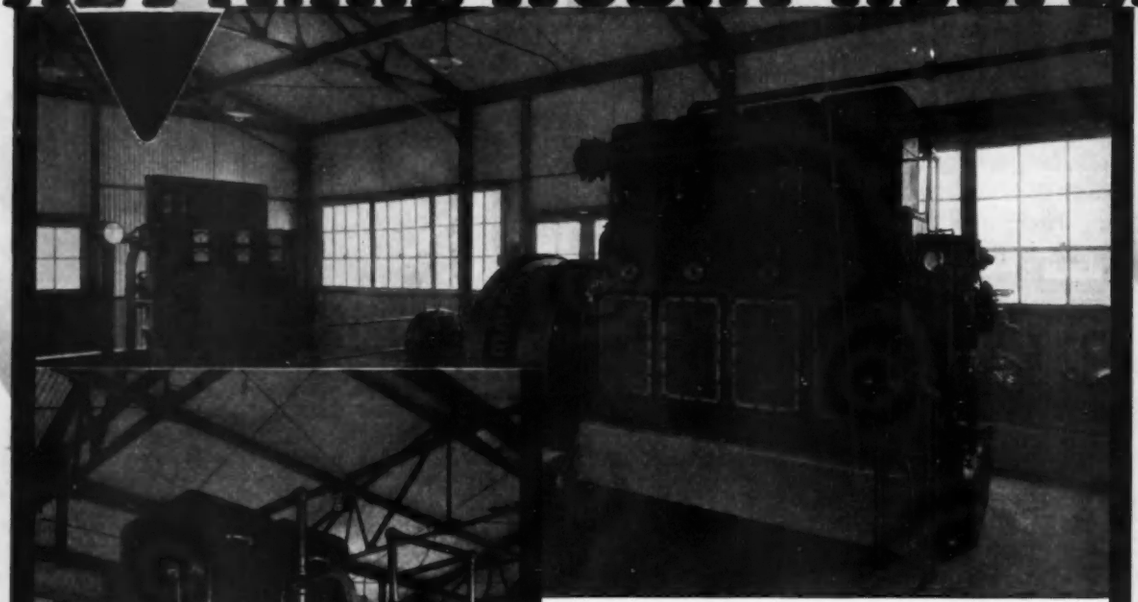


Verticals
-THEY MAKE HUSKY HELPERS



One of two Cooper-Bessemer 200 B. H. P. Vertical gas engines direct-driving 156 K. V. A. generators in Sterlington station of United Gas Company, Kline Spur, La.

Cooper-Bessemer 90 B. H. P. Vertical gas engine direct-driving 75 K. V. A. generator in Cole Bruni station of United Gas Company at Bruni, Texas.

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FOR YOUR BIG MAIN ENGINES

Like the sinews of a mighty arm, the fiber in this die-forged crankshaft is directed to resist stresses. Cross-section photo shows continuous flow lines.

A large-diameter die-forged crankshaft is just ONE of the strong points of the 11-1/2 x 14" convertible vertical engine. Every part subject to heat, friction, stress and strain is heavily fortified against trouble. It is wise to choose auxiliary power units with the same care you do main compressor units. Thoroughly investigate these compact, enclosed vertical engines for dependable compressor station service.

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No Need for Gas Masks

with

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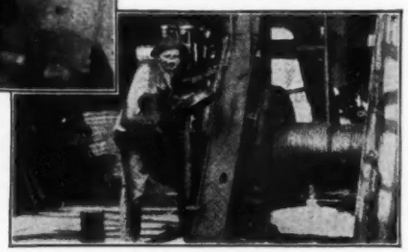
A Different and Better Material for Oil Well Brakes

The same scene AFTER American Brakebloks were installed. The gas mask is no longer necessary as American Brakebloks do not smoke or fume. Notice also the ease of the driller. The pipe is under perfect control with slips about to be set, yet practically no physical effort is required to hold the load.



Scene at the world's tallest derrick (California) BEFORE American Brakebloks were installed. Note the gas mask which the driller had to wear on account of the dust and fumes from the brake lining. The sponge in this gas masked showed considerable copper dust.

American Brake Materials

(*Leaders for 30 Years*)

Best for Oil Well Brakes
Best for Railroad Brakes
Best for Automotive Brakes

REPLACE your brake lining with American Brakebloks and *never* again will it be necessary for your crew to wear gas masks; *for there is absolutely no dust or smoke or fumes with American Brakebloks.*

The bonding agents used in most brake linings all melt or soften under the higher braking temperatures. Heat soon burns the life out of such material.

American Brakebloks, on the other hand, are bonded by a new and different compound—a secret agent—*which can NOT be* softened or volatilized even by blistering heat generated in oil well braking. They will not burn. They will not soften and tear loose from the bonds. They will not swell. They will wear evenly, maintaining a constant coefficient of friction *always.*

This is one reason (there are many others) why American Brakebloks out-wear all types of woven and molded linings, and CUT BRAKING COSTS IN HALF! Install them next time and judge for yourself. Notice how kind they are to the flanges—how quickly installed—how dependable at every depth—how long they last. Write now for name of nearest supply house and for folder descriptive of performance records.

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AMERICAN BRAKEBLOKS
TRADE MARK REG IN U S AND CAN PAT OFFS

Electrical Installation *Of* Motors *and* Transformers

By E. L. SPAUGH
Chief Electrician, Rio Bravo Oil Company

RIO Bravo Oil Company's pumping equipment in the Guffey, Humble, Luling, Pierce Junction and Saratoga oil fields is practically all powered by electricity. Electricity is also used in these fields for treating oil, for pipe line pumps and for lease lighting. Various sizes of motors are used to meet the individual requirements of each job. Also various sizes of transformers are needed to distribute the power as required. Motors are rated in horsepower (HP) and transformers in K.V.A. In making a final section of electrical material to be installed all of the economic features should be considered.

Motor Housing

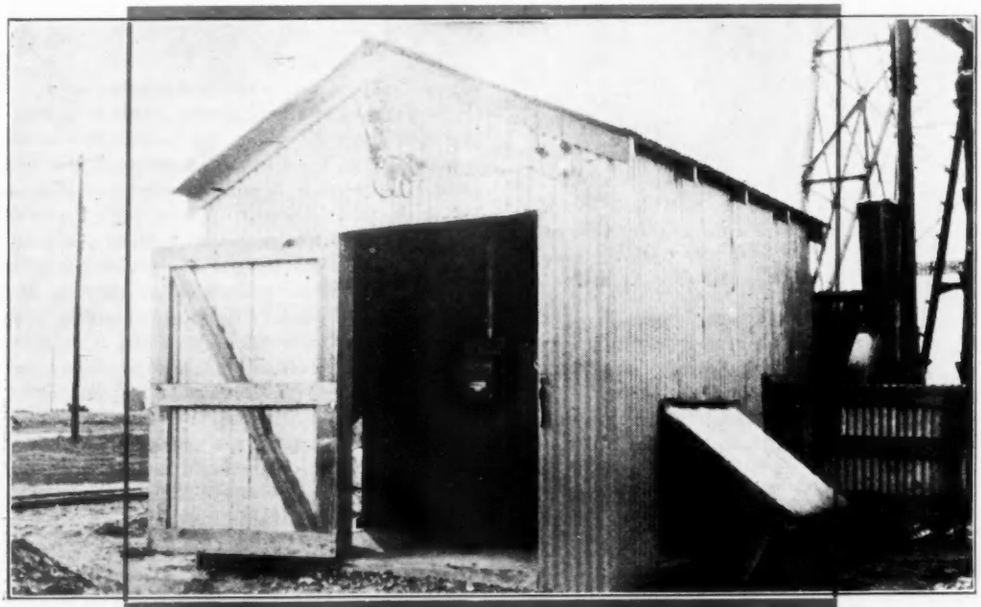
All motors and gridstands should be housed for protection from weather. A large number of the company motors are used with individual well pumping units so a detail of this motor housing will be given. These motor houses have been of a standard size since 1928 and the only changes in construction have been the strengthening of the roof supports and a change in the wall openings to give better ventilation.

The standard motor houses are 10 by 12 feet with eight-foot walls and with a gable roof two feet six inches higher at the ridge. These houses are small but offer ample room for the installation of motor, grid stand, controller and wiring and still leave adequate space to make any necessary repairs. Each building has a four-inch concrete floor, the bottom of which is above ground level. In the rear side of the motor house there is a four-foot eight-inch by six-foot eight-inch door which is large enough to permit passage of any of the equipment used.

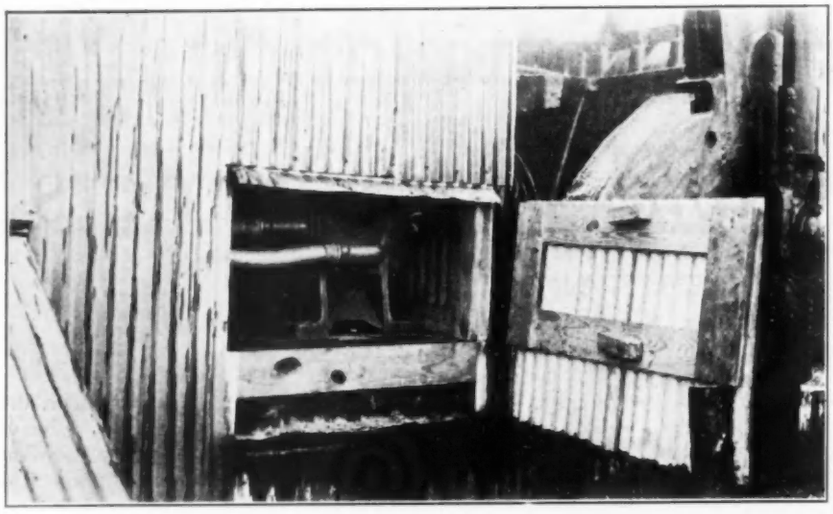
Ventilation is secured by means of openings in the side walls. On each side of the house there is an opening four feet wide by three feet high extending from the floor level. These openings are covered by a flap window hinged at the top. On the side of the motor house next to the crank there is an opening three feet eight inches wide by two feet six inches high covered by a slide window lifted from the inside of the building. This opening is only used while making motor repairs or when additional ventilation is needed for the motor. A sectional opening is also made at the front of the motor house between the motor and the unit. This section is only removed during motor repair work and is held in place by strips of one by four lumber.

The roof support is built strong enough to be used for lifting the motor and equipment. The rafters are two by four with four two by six joists, one joist being placed near the end plate just above the motor. A piece of four by six, 11 feet long is laid on top of these joists and is used as a support for a hoist in removing one motor and replacing it with another.

The lighting system of derrick floor on a pumping well

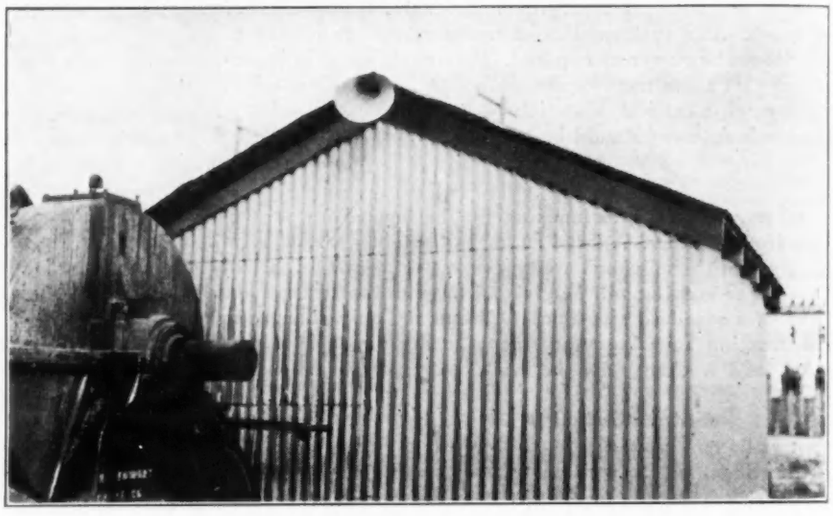


Motor house, showing ventilation system. Rear door on right gives access to motor.



Trap door which serves double purpose of ventilator and as a means of attending motor.

Rear of motor house showing reflected light which is important in the scheme of lighting.



has been improved. At the top of the gable on the unit end of the motor house the rafters are left unnailed and are tied together with a strip of one by four. This is done in order that necessary wiring may be installed and a hole bored close to the top of the gable to install a light reflector outside of the building which serves to light the unit and the derrick floor. Thus all wiring is compact within the motor house and there is no electric wiring on the derrick floor of a pumping well. This change was made to eliminate fire hazard and has thus far only been made on new installations. All electric wiring inside the motor house is installed in conduit in accordance with the national electrical code rules.

Motor Foundations

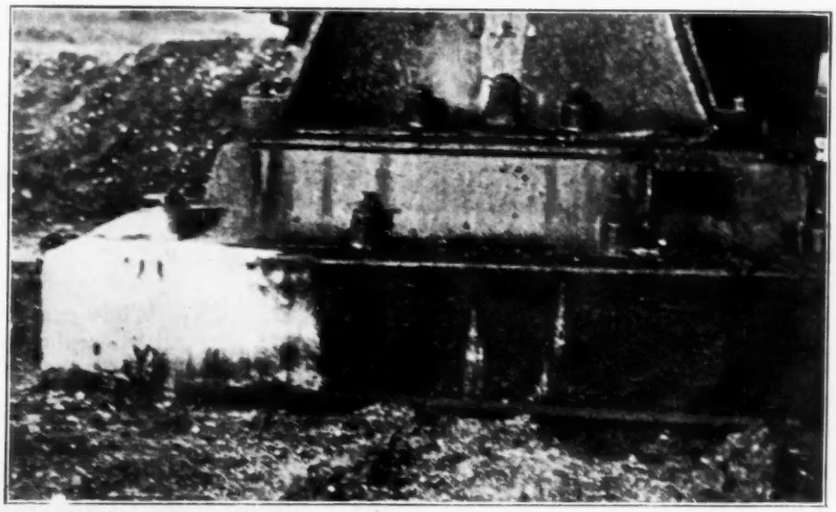
The foundation block for motor and pumping unit is the most important part of the installation. The block for the motor and unit are usually one and the same and should be connected with the Samson post block by a concrete member of sufficient strength so that the two foundations will forever be insured of being as one solid block. This cannot be done with a small connecting concrete member nor can it be done with a large one unless it is properly reinforced with plenty of steel. This reinforcing can be of old sucker rods or equivalent junk material but the surface should be free from rust and oil. The writer believes Rio Bravo Oil Company's construction plan if followed to the letter is sufficiently strong for any pumping unit installed for this company's operations, the only suggestion offered is that the construction plan be altered to include these improvements which have been made during the past year and that the rig builders be compelled to comply with this construction plan.

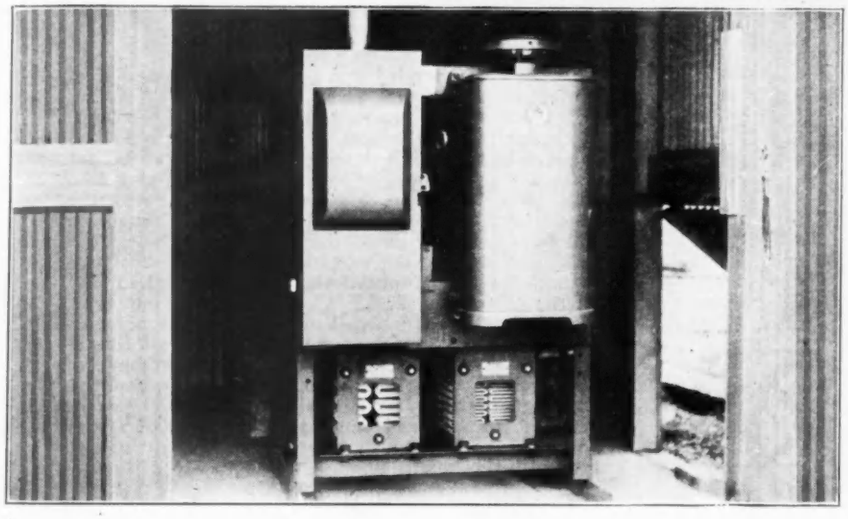
Motor Installation

In all motor installations by Rio Bravo Oil Company, care is taken to place the motor in the most convenient place. All wiring from entrance switch is placed in conduit. The proper size of wire is used but this in turn depends upon the size of motor. All switches for controller and grid are placed in the most convenient place so that they are readily accessible in case of trouble. Grid stands are very fragile so they are placed where there is little occasion for them to be broken. All electrical wiring is pulled into conduit pipe, lugs are soldered on the wire, all connections are made and the conduits are closed. Thus the complete wiring circuit in the motor house is compact and contained in flexible conduit. The improved system of lighting has been explained in a previous paragraph. There is no electric wiring outside of the building except the entrance circuit from the source of the electric power. Finally the motor bearings are filled with motor oil to a level slightly below the top of the overflow plug and the motor is tested idle to see that everything is all right.

It can be said that almost any machine has some one factor of its maintenance that has more to do with its successful performance than all the others, in the case of the electric motor this feature is the care given the equip-

Pumping unit foundation, a continuation of the motor foundation. Motor, pumping unit and Sampson post are all on the same block.





Grid and grid stand, showing ventilator at right, open.

ment after it is put in operation by the man on the lease. One of the chief causes of motor trouble or of any electrical equipment is over-loading or trying to make it do more than it was designed for. With motors this trouble is usually first noticed by the motor running hot and is often caused by lowering tubing in a well and then failing to reset the counter-balances on the unit crank to take care of the increased lift of the rods. Motors, and in fact all electrical equipment, should be kept clean for when dust collects on slip rings and on contacts, it affords a place for moisture to collect and thus offers a short circuit across the terminals or to ground. Thus cleanliness is an all important factor in avoiding trouble.

Another very important source of trouble with motors is the oil in the bearings. Too much oil is too often used. The bearing housing is constructed to hold just the right amount of oil for good lubrication and an overflow plug is placed at this level. When too much oil is used it not only creeps out along the motor shaft into the windings but also throws grease on the motor frame and floors. It also causes overheating of the motor bearings by cutting down the air space and retarding circulation. As long as a bearing runs reasonably cool no oil should be added unless the oil gets below the overflow level. The oil should be drained from the motor bearings and refilled with new oil at least every three months. Algol Number 525 is the standard oil used in motor bearings by this company and is satisfactory for use the year around.

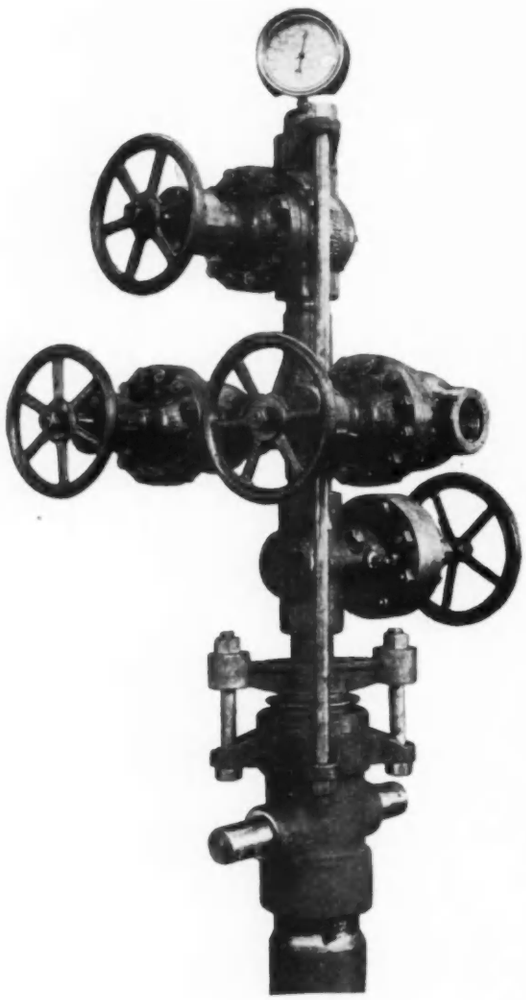
Another motor bearing trouble can be eliminated by keeping check on the alignment of the motor to unit coupling on direct coupled drives. The coupling should be so fitted that the motor will run in a straight line and not bump from end to end. This latter condition causes shoulders in the bearing lining and results in heating the bearings.

The equipment installed should be of such design that when the wells are pumping the motor is running full rated speed and the grid stand is cut out. Whenever this is not the case there is overheating of the grids which tends to cause them to burn out or the motor will run sluggish over the high side. Good ventilation should be maintained so that air may readily circulate through and around the motor and grid stand as overheating causes inefficiency. However it is imperative that this type of electrical equipment be kept dry so ventilating openings must be closed during a rain.

Transformers

The majority of Rio Bravo Oil Company's transformers used for pumping wells are either 37½ or 50 K.V.A. capacity. They are usually installed in banks of three so located that the distributing lines to the individual wells are as short as possible. Three transformers are installed in one bank so that the bank will have sufficient capacity to carry the normal pumping load of a group of wells and still have enough reserve capacity to take care of the increased load if it was necessary to pull tubing. For example a bank of three 37½ K.V.A. transformers would have a capacity of 112½ K.V.A.. If they were serving a group of eight wells

A NEW C-I-W



While exceedingly simple in design and construction, the new C-I-W Tubing Head suspends and seals the tubing; provides a quick, emergency shut-in if the well should kick or blow; lands the tubing so the master gate can be closed at any time with tubing in the hole; and is arranged to permit the use of a C-I-W Ram Type Tubing Control Head above as a positive safeguard against blowouts, or in case of necessity to complete tubing job under pressure.

Tubing is suspended and sealed on a tapered steel landing collar which seats in the head. Oil-resisting hydraulic packing inserted in the taper of the landing collar makes the seal. Landing collar is locked in place by a split tie-down clamp which can be put on in a few seconds, or taken off by removing two nuts. Four tie-down ears are cast integral with the head, two for tying down the tapered landing collar, and two for tying down the Christmas Tree to the Tubing Head. These ears eliminate the cost of two casing clamps. A special clamp is furnished for use on the Christmas Tree. Tie-down is by steel rods, threaded at both ends. Rods and clamps are furnished as standard equipment with each head. Standard pipe threads in top of the Head permit use of any desired type of hook-up. Illustration herewith shows Christmas Tree mounted on steel nipple screwed into tapered landing collar. Use of a gate valve above the Head permits shutting well in with tubing in the hole.

To take care of well kicks or blows, tapered landing collar can be made up on double of tubing, with valve above, and hung in derrick on elevator. In case of blow, stab double and make upon a string, lower until tapered landing collar seals off in head, and close valve.

Tapered landing collars are furnished with any desired thread up to 3-inch on both top and bottom. Use of a C-I-W Ram-Type Tubing Control Head above gives absolute control at all times, and permits tubing to be run under pressure if necessary.

Deliveries on C-I-W Tubing Heads (Tapered Seat Type) are now being made to Supply Companies. For the convenience of the operators who desire, we will gladly make up and test Christmas Trees complete at our shops, ready to go on the well. When this is done, it is only necessary to tighten down four nuts to complete the hook-up of Christmas Tree on well.

Further details and information will gladly be furnished on inquiry. Write for special illustrated pamphlet.

CAMERON

HOUSTON,

TUBING HEAD

« TAPERED SEAT TYPE »

features » »

Rugged, simple, safe—tested to individual requirements up to 3,500 pounds.

* * *

Suspends tubing safely, and seals-off positively.

* * *

Provides for quick emergency shut-in should well kick or blow while tubing is being run.

* * *

Suspends tubing below master gate, permitting gate to be closed at any time with tubing in the hole, if this type of hook-up is used.

* * *

Designed so that C-I-W Ram-Type Tubing Control Head can be used above, which positively insures against blow-outs, and permits tubing to be run against pressure in the only safe, sure way. After tubing is landed, Ram-Type Head may be removed for use on other wells.

* * *

Provides for simple, quick, positive tie-down of tubing, and also provides for tie-down of Christmas Tree to Tubing Head. Four tie-down ears cast integrally with the Head, and two tie-down clamps with necessary rods furnished as standard equipment with each head, eliminate the cost of casing clamps, rods, turn-buckles, etc.

* * *

Due to the use of standard pipe threads in top of Head, any desired type of hook-up can be used above head. You are not limited to one type of hook-up, as any number of combinations can be made.

* * *

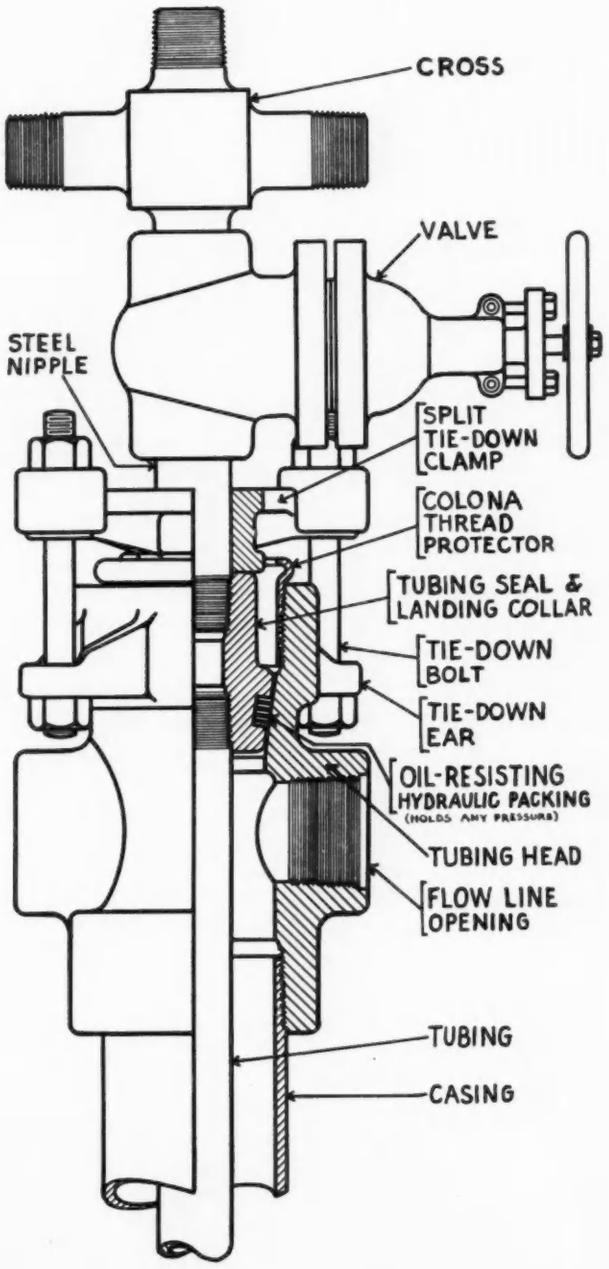
Can be converted into a pumping unit by removing Christmas Tree and connecting a polish rod stuffing box.

* * *

Entire Christmas Tree can be removed by loosening four nuts and breaking out one thread.

* * *

Safe . . . Positive . . . Versatile . . . Easy To Install . . . Sold By All Leading Supply Companies.



IRON WORKS

TEXAS

each requiring eight K.V.A. for pumping, there would be an available capacity of 56½ K.V.A. for pulling any one well. Practically all of the pumping service transformers are three-phase 2300 to 440 volt and are operated in a closed delta bank, as the regulation of an open delta bank is not as good as that of the former. The efficiency of a transformer is the ratio between watts output and watts input, the output is the total available energy delivered to the primary terminals. Transformers should be tested often where they are heavily loaded because the energy loss in the transformer becomes greater due to overheating. These energy losses are known as iron loss, copper loss, and exciting current loss. For maximum efficiency the temperature of a transformer should never exceed 75° C. or 167° F. Great care is taken by the electrical department that the load on transformers does not exceed their normal rated capacity. Again certain types of transformers have certain characteristics that affect their efficiency under varying load conditions and this item should be considered as well as the first cost when requisitions are prepared.

Power Lines for Pumping Circuits

All electric power lines, secondary lines, for pumping wells should be of number 2 copper wire. These lines should be straight and on good insulators free from breaks. The 440-volt lines should be on 30-foot poles and the 2300-volt lines on 35-foot poles. The poles should be creosoted Class A poles with seven or eight-inch top. The construction work should be of the highest type for, once in service, it is seldom that a cut-in can be made for repairs without shutting down the pumping wells on that circuit. These lines should be watched for pulled-over poles or slack wires and the attention of the electrician should be called to same. Truck drivers and teamsters should not be allowed to tie snubbing blocks to the base of power line poles.

Lighting Circuits

No lighting equipment should be installed in a temporary manner unless in emergency and as soon as the emergency is past the installation should be made permanent or should be removed. All light circuits should be properly insulated and no joints should be left open. Most of the trouble in lighting circuits is due to faulty wiring and no electric wiring should be done in any field without the supervision of the chief electrician or upon the authority of the division superintendent. In lighting circuits care should always be taken that no lights are installed without a switch and fuse, and the fuse always should be in the switch and not a substitute as a penny or a piece of wire.

General Maintenance

General overhauling of motors and transformers in the respective fields is carried on by the electrical department. This equipment is cleaned and painted once each year, and a regular inspection made covering the following items—drain and refill motor bearings, all ground connections, blowing out and washing motor, checking all protective devices, painting motor with high grade gray paint, insulating coils with a high grade insulating paint, cleaning and painting framework or gridstand, cleaning and adjusting contacts on controller, checking up on all compensators, checking all wiring, making repairs to motor and motor wiring, checking transformers for oil level, and checking fire hazards. In addition to these an inspection is made as often as time will permit. Although most of this equipment is in more or less continuous operation, arrangement is made so that it can be shut down for necessary inspection and repair.

Hazards of Electrical Work

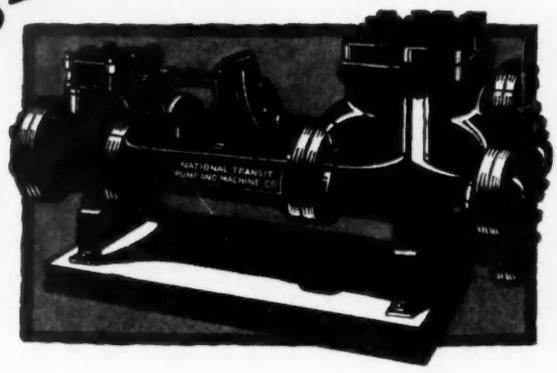
From a safety standpoint all trouble in electrical equipment should be reported and an electrician should make the necessary repairs as he is better acquainted with the danger in this type of work. Very serious burns can result from improper handling of wires with voltage as low as 110 volts. Also a shock which may result in serious injury or death caused by touching a live part of a circuit with the hand or with some metal object may also cause a short circuit or a flashing which may result in injury to persons nearby. There may be flashing or arcing in the controller when making or breaking contact or changing the motor from high to low speed as certain parts of the control equipment are live; so the controller should be shut off during these changes. Excessive current caused by overload and overheating may damage the insulation and thus leave the equipment in a dangerous condition.

Whenever equipment is shut down, the main switch should be pulled to "off" position. This is a protection against the hazard of unexpected starting as well as against lightning. Always see that switches are in "off" position before changing fuses. Never pick up electrical wires lying on the ground as there is always a chance that the wire may be "live."

Shell Oil Company's properties at Ventura, California, are noted for their clean, orderly appearance. One of the little stunts contributing to the general neatness of the properties consists of a trap in which to control waste water and sludge escaping when the boilers are blown down, as they must be at regular intervals. Since the plant is located in a congested town-lot area, along Ventura Avenue, a filthy mud-puddle might result if some such trap were not used.

The trap is made of an old worn-out boiler, half-buried in the ground. Uncondensed vapors escape into the atmosphere through a six-inch vent pipe welded into a hole of the same diameter cut out of the dome. Water and sludge are drained from the boiler chamber and run off through natural drainage channels.

Living up to a Lithograph



Great things have always been expected of TRANSIT products.

This requires eternal vigilance on our part. A TRANSIT pump or a TRANSIT engine which has rendered the utmost in satisfactory service is looked upon as merely fulfilling the expectations. On the other hand, if a TRANSIT machine does give trouble, then the reaction is opposite--it is not what was expected--and much ado is made about what would ordinarily be considered insignificant.

But we would not have this changed. It is as it should be. We find it a very steadying influence in these days of fads and faddists. The purchaser is generally interested in securing the greatest number of barrels pumped for the least possible pumping investment. We recognize this fact and have always built our pumps accordingly.

Design and material are considered sub-servient to performance. Change is considered only when it will lower the pumping cost per barrel.

Los Angeles
Tulsa
Houston

NATIONAL TRANSIT
PUMP & MACHINE CO.
OIL CITY, PA.

New York
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Cleveland
Pittsburgh

TULSA and MID-CONTINENT FIELD
Frick-Reid Supply Corporation

NEW ORLEANS, LA.
Woodward, Wight & Co.

SALT LAKE CITY, UTAH
F. C. Richmond Machinery Co.

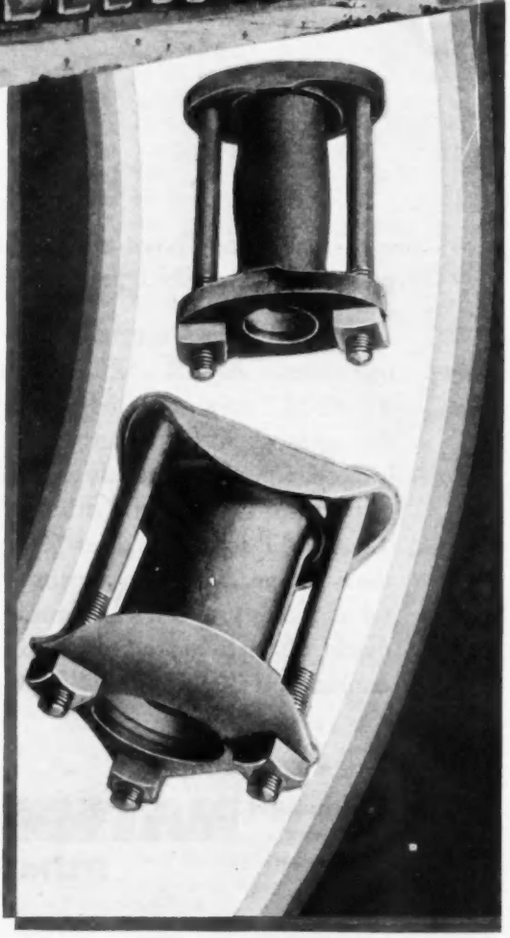
LOS ANGELES
Republic Supply Company of California

BEAUMONT, TEXAS
E. L. Wilson Hardware Company

PHOENIX, ARIZ.
Pratt-Gilbert Co.

ST. LOUIS, MO.
Reeves & Skinner Machinery Co.

METER CONNECTIONS must be GAS TIGHT



Gas meters, too, must have absolutely tight connections. Dresser Couplings dominate for this service—just as they dominate for high pressure pipe lines. Easy to install, Dressers *remain permanently tight* under all working conditions. First cost is the only cost.

S. R. DRESSER MANUFACTURING CO.
BRADFORD, PA.

DRESSER COUPLINGS DOMINATE

for this service

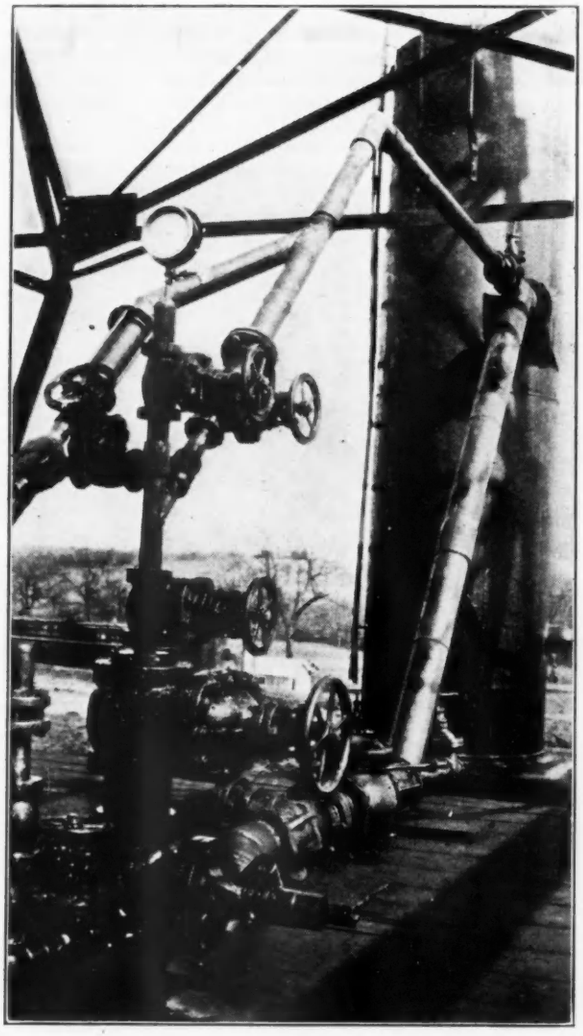
Proration Develops Combination Head for Flowing Wells

By FLOYD SWINDELL
Staff Representative

RECENT changes in proration regulations governing the Oklahoma City pool, place all fields in the state on a percentage of potential basis for limiting production to demand. All of the regulations excepting those applied to the Oklahoma City pool during 1930, have granted the option of continuous or intermittent flow for obtaining allowance production. It has been generally admitted that the former method is more conducive to efficiency through conservation of gas, thereby prolonging the flowing life of wells and possibly retarding water encroachment. However, even in the face of this admission, only a few properties have been produced by continuous flow and the general practice has been to open wells to capacity and secure allowable production in a relatively small part of the month. In the few instances in which the former practice has been in force, a number of novel flow connections have been developed.

A majority of the wells in the West Asher-Wanette pool, in southern Pottawatomie County, have been allowed to flow through large strings of casing, resulting in high gas-oil ratios and correspondingly low lifting efficiencies. Production in many instances has declined at a rate in excess of 10 per cent per month. Pressures have declined in a like manner and it has been evident for many months that something must be done to prevent the necessity of placing all wells on the pump or installing gas lift. The latter method has proved inadequate to the requirements of proration principally because of the fact that intermittent flow has been the practice and compression plants can not be economically operated under this plan. Several

(*Continued on page* 60)



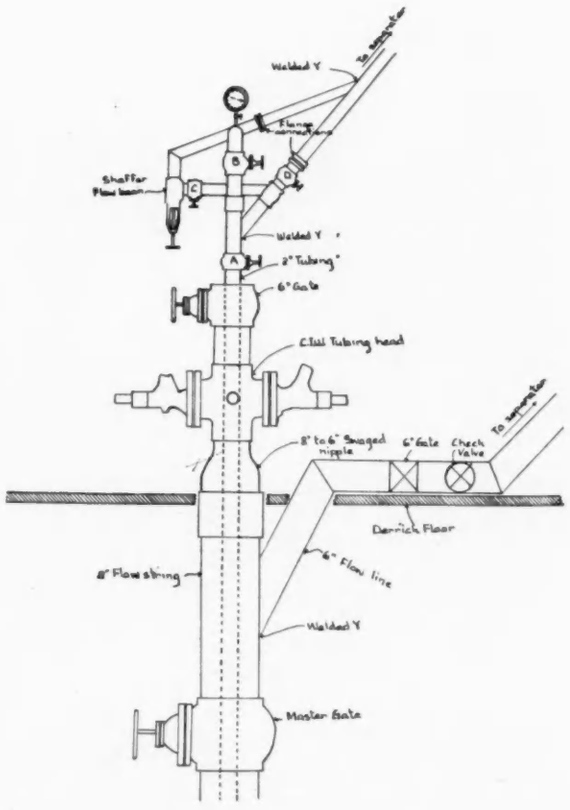


FIGURE 1
Showing installation and details of tubing head which permits open flow or back pressure as desired

Polish Engineers Take *in Of the* Oil Industry

AMERICAN engineers have nothing on their Polish contemporaries, so far as organization goes. One finds there counterparts of the American Institute of Mining and Metallurgical Engineers, the standardization committee of the American Petroleum Institute, and of the various oil and gas associations and engineering societies which have contributed so heavily to the progress of the industry in America. All of these associations are co-operating in the study of local problems and in the modernization and advancement of operating methods and machinery.

Of greatest importance, perhaps, are the Stowarzyszenie Polskich Inzynierow Przemysl Naftowego w Boryslawiu and Izba Pracovawcow w Przemyslu Naftowego w Boryslawiu, whose names might be freely translated as the Association of Polish Petroleum Engineers, of Boryslaw, and the Boryslaw Oil and Gas Association. The former is headed by Engineer M. Karpinski, of the Societe "Malopolska," as president, assisted by Engineer M. Krygowski, of Lasziz-Suhestow, and Engineer T. Bielski, of "Malopolska," as vice-president and secretary, respectively Boryslaw Oil and Gas Association is led by Engineer T. Chlopowski, managing director of the "Galicja" company, as president, and Dr. T. Laluski is its secretary.

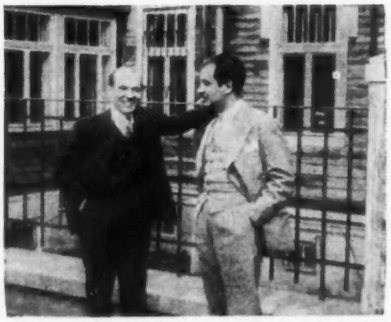
The activities of the association of Polish petroleum engineers are divided into several sections in which work is carried on by special and permanent committees, as in America. These include the psycho-technical section, whose work with human material is referred to below; the drilling and geological section, which is headed by Engineer J. Zielinski, field geologist for Standard Nobel Company, and whose scope of activity is outlined by its name; and, by no means of last importance, the *Sekcja Naukowej Organizacji*, or scientific organization section, which conducts researches into operating methods and special problems confronting the industry and whose efforts are directed toward the standardization of methods, tools, and equipment. This section is headed by M. Krygowski, vice-president of the association. Engineer J. Wojnar, secretary of this section, is also in charge of physical and mental tests which are made to determine the aptitude of candidates for apprenticeship and employment in the Polish oil industry.

The *Komisja Normalizacji* (normalization or standardization commission) enjoys financial support by the co-operative Societe "Pionier" and the Boryslaw Oil and Gas Association and collaborates with the Association of Polish Petroleum Engineers in the work of rationalization and standardization of methods and equipment. Engineer T.

Inz. John W. Klimkiewicz, technical director, Societe "Pionier," Lwow, Poland.

Inz. John W. Klimkiewicz, technical director and Dr. S. Weigner, managing director, Societe "Pionier," Lwow, Poland.

Right: Wilhelm Anderka, drilling foreman and Adam Radlowski, drilling superintendent, looking at slotted cap for handling inserted joint casing without elevators, Societe "Limanowa," Boryslaw, Poland.



Upper left: Stanislaw Hennig, Dyrektor Kopalnie (field manager) and Jan Triczler, technical director, Standard-Nobel w Polsce, Boryslaw, Poland; center: Marcel Verdouck, technical director, Societe "Limanowa," Boryslaw, Poland; upper right: Abel Bernard, manager of gasoline plants, and Marcel Verdouck, technical director, Societe "Limanowa," Boryslaw, Poland.

Hand *the* Reorganization *of* Their Country

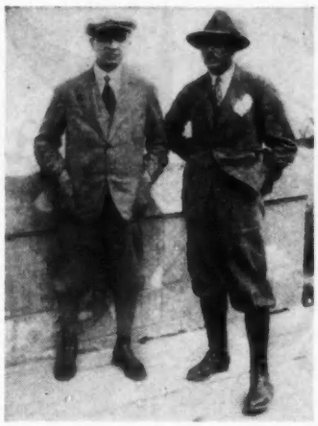
Bielski, of "Malopolska," is chairman, and other members of this important commission include Engineer Wl. Kolodricj, of the Mechanical Testing Station, referred to below, Engineer M. Krygowski, of Lasziz-Suhestow, Engineer K. Ksiazkiewicz, of Warstaty Nafty, and Engineer W. Skoczynski, of Warstaty Dawidowiczor, supply firms, St. Mazanek, field superintendent for "Malopolska," Engineer A. Smagowicz, assistant field superintendent for the Standard Nobel Company, Engineer T. Tokarzowski, author of a highly-regarded treatise on percussion drilling, and Engineer J. Wojnar, of the *Sekcja Physotechnic.*

The field superintendents of the Boryslaw district have organized the Zwiaezek Polskich Technikow Wiertniebych, which one trustingly believes to mean the "Association of Polish Technical Superintendents." The superintendents association maintains a clubhouse and restaurant at Boryslaw, where files of trade journals and technical literature are available and where discussions of a technical nature are cleverly interspersed with yarns and stories of the type favored by oil men everywhere.

The Mechaniczna Stacja Doswiadczalna Politechniki Lwowshicj, or "Mechanical Testing Station of Lwow Polytechnical Institute," exercises a strong influence for the improvement of Polish oil field equipment. It is a testing laboratory, a sort of extension service supported by the technical college of Lwow. Engineer W. Kolodricj, who is in charge, conducts laboratory and field tests of metals and materials offered or introduced into Polish oil fields. This station, in co-operation with the operators and engineering societies, has brought about many changes in the metallurgical formulae of drill bits and other tools and equipment which in former times were manufactured in hit or miss fashion of metals and alloys not necessarily suited to the job in hand.

The Panstwowy Instytut Geologizny, or "Geological Survey of Poland," maintains a petroleum section at Boryslaw, which is known as the Karpacka Stacja Geologiczna, or Carpathian Geological Station, and is in charge of Dr. T. Tolwinski. It is supported by the oil companies and conducts geological researches, prepares maps, compiles geological data, analyzes samples of underground waters, and gives technical advice to small operators not able to afford the employment of geologists.

The Naftowa Stacja Doswiadczalna (Petroleum Experimental Station), of Boryslaw, which is headed by Engineer S. Glazer, analyzes samples of oil and gas and conducts other chemical and laboratory tests necessary or incident to oil production operations.



Upper left: Josef Miziak, production foreman, and Adam Radlowski, drilling superintendent, Societe "Limanowa," Boryslaw, Poland; center: Stanislaw Hennig, Dyrektor Kopalnie (field manager) and Jan Triczler, technical director, Standard-Nobel w Polsce, Boryslaw, Poland; upper right: Adam Radlowski, drilling superintendent, and Woclow Wazny, gas engineer, Societe "Limanowa," Boryslaw, Poland.

M. and Mme. Charles Marty and Marcel Verdouck, of the Societe "Limanowa," Boryslaw, Poland. M. Marty is general manager and M. Verdouch is technical director.

Group of officials of the Societe "Malopolska," including Prof. Z. S. Bielski, technical director, and Maurice Freund, administrative manager Boryslaw, Poland.

WHY CALLED "TESCO"

The name "Tesco" is given to the products of this company for two reasons:

1. It contains the initial letters taken from the name of the company.

2. The name "Tesco" connotes *test,* the key thought and dominant idea that go to make up the character, personality, and the soul of this company . . . tested quality products assured by manufacture under rigid chemical and physical control.

¶ Fireproof storage protects your patterns. ¶ Laboratory control gives you uniformity. ¶ Steel specialists working as a unit with modern equipment in a modern plant assures you of quality and prompt service.

TEXAS ELECTRIC STEEL CASTINGS CO.

BRINGHURST AND GILLESPIE STREETS

HOUSTON - TEXAS

H. J. STRUTH, *Staff Economist, Houston, Texas*

Economic Report Submitted at Washington Conference

By CLARENCE L. LINZ, *Washington Correspondent*

WASHINGTON, D. C.—First steps toward formation of a plan to be submitted to the Federal Oil Conservation Board at its meeting with the oil industry on April 9 were taken here Tuesday when members of the oil states advisory committee met for a preliminary discussion of the situation.

The day was spent chiefly in canvassing conditions. W. R. Boyd, vice-president of the American Petroleum Institute; W. N. Davis, president of the Mid-Continent Oil & Gas Association; Wirt Franklin, president of the Independent Producers Association; R. B. Brown, secretary of the Independent association, and former Senator Henry J. Allen of Kansas met with the committee, and in general approved the Texarkana plan.

Much of the difficulty of the present situation, it was indicated, arises from the fact that proration orders run for only 60 to 90 days and there is no foretelling what will happen when they expire. The fears thus engendered, it was said, have caused the withdrawal from storage during the past 12 months of some 40,000,000 barrels. The view was expressed Tuesday night that if the states will assume control of production to balance demand as nearly as possible, the oil industry will be willing to pay a reasonable price for oil so that the stripper wells, of which some 360,000 are producing 500,000 barrels a day, can be continued. If proration is killed, however, it was declared the market will be flooded with cheap oil.

Coincidentally with the convening of the oil men, Secretary of the Interior Wilbur, as chairman of the Federal Oil Conservation Board, made public a preliminary report from the voluntary Committee on Petroleum Economics, covering the probable demand for oil and gasoline during the period from April 1 to September 30, next, which indicated that domestic production during that period should be approximately 461,434,000 barrels, or a daily average of 2,521,497 barrels.

The production for each of the leading areas during the period is suggested by the committee as follows:

	Total Barrels	Daily Average
Texas	162,641,000	888,749
Oklahoma	113,340,000	619,344
California	96,624,000	528,000
All Others	88,829,000	435,404

"The American oil industry should not anticipate, during the period under consideration, a total gasoline demand in excess of 252,000,000 barrels, a decline of eight-tenths of one per cent from the total gasoline demand of 254,108,000 barrels during the corresponding period of 1930," the voluntary committee warned. "A relatively small increase may be expected in domestic demand but it is probable that a decrease in shipments to other countries will more than offset it."

Exports during the six months are estimated as 29,200,000 barrels, against 34,519,000 barrels last year, while domestic consumption is expected to be under that of 1930 during April, May and September. Imports, it is anticipated, will be approximately 6,600,000 barrels, against 9,863,000 barrels in the same period a year ago.

Crude oil imports are expected to be cut nine per cent from the 1930 total, from 33,000,000 to 30,000,000 barrels. To provide estimated requirements on the basis of anticipated production, exports and imports, withdrawals from stock of 17,400,000 barrels would be required, reducing stocks from the 48,000,000 barrels estimated as of April 1 to 30,600,000 barrels September 30.

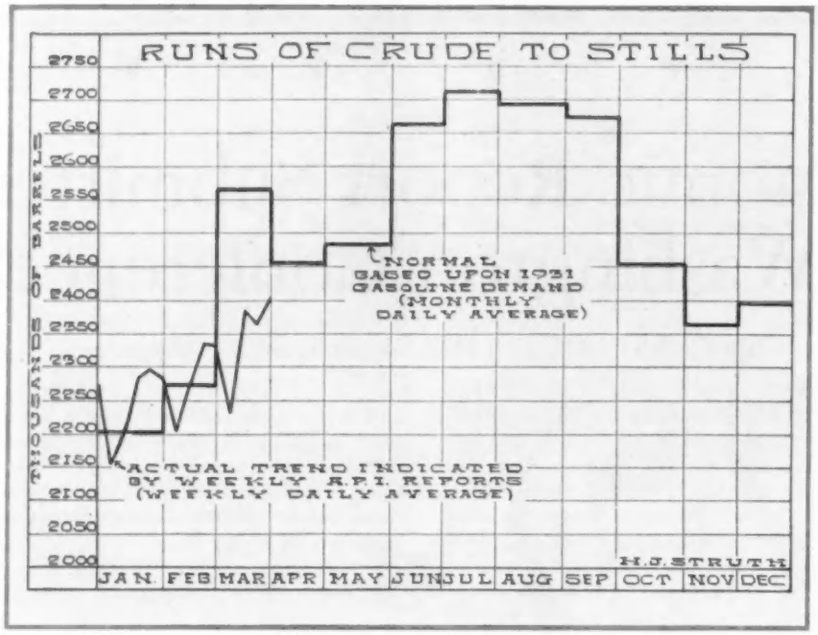
"To meet the estimated total domestic and foreign motor fuel demand of 252,000,000 barrels, the committee anticipates the receipt of 6,600,000 barrels from foreign sources and the withdrawal of 17,400,000 barrels from storage, leaving 228,000,000 barrels as the quantity which should be produced at domestic refineries and plants during the 1931 period," the report continued. "This corresponds with 227,260,000 barrels produced during the same period of 1930. It is estimated that 3,860,000 barrels will be supplied from miscellaneous sources. Subtracting this miscellaneous production from the total requirement, there remains the quantity of 224,140,000 barrels as the indicated amount of gasoline to be produced at domestic refineries during the period.

"Following a careful analysis of recent trends in gasoline recovery in each of the refining districts, the committee has reached the couclusion that the average production of gasoline, including the natural gasoline blended at refineries, will equal 48.365 per cent of the crude run. Applying this ratio to the estimated refinery production of 224,140,000 barrels, the committee has arrived at the figure of 463,434,000 barrels, as the estimated quantity of crude oil which will be required in the production of the estimated gasoline output.

"In addition to the requirements of crude oil for processing, it is estimated that exports will amount to 13,000,000 barrels during the period and that an additional 15,000,000 barrels may be represented in the consumption of crude oil directly as fuel; in crude oil transferred to fuel oil stocks; and in losses in handling. The addition of these separate needs leads to the figure of 491,434,000 barrels as the total estimated crude oil requirement during the period under consideration. Deducting the estimated crude imports of 30,000,000 barrels, there remains the quantity of 461,434,000 barrels as the estimated total requirement of domestic crude oil during the period.

(*Continued on page 76*)

MARKET SECTION



Decline at Oklahoma City Offsets East Texas' Gain

Taking potential gauges in the Oklahoma City field resulted in a sharp drop in Oklahoma's production last week, amounting to 41,250 barrels. This caused a net decrease in United States daily average crude production of 23,250 barrels; the total daily average having receded from 2,275,350 barrels to 2,252,100 barrels. As a matter of fact, had it not been for the sharp drop in Oklahoma's production there would have been a gain in national output by reason of the fact that East Texas recorded another increase of over 22,000 barrels last week. Thus, Oklahoma's sharply lower production acted as an offset to the further increase in East Texas.

With taking of potentials in the Seminole area completed and work of a similar nature having been started at Oklahoma City, it is apparent that the latter field will show an excessive production during the next few weeks.

East Texas daily production is now up to 144,700 barrels, having recorded another gain last week of 22,600 barrels. Joiner production is rated at 51,500 barrels daily; Kilgore, 68,200 barrels daily; Longview, 25,000 barrels daily. As a result of the continued upward trend of production in East Texas, the state total, on the basis of the new allowable

Crude Runs to Stills, Gasoline Stocks and Gas and Fuel Oil Stocks

Week ending March 28, 1931

(Figures in barrels of 42 gallons)

District—	Potential Capacity (Daily) Total	Reporting	Per Cent	Crude Runs to Stills Total	Daily Average	Per Cent Operated	Gasoline Stocks at Refineries	Gas & Fuel Oil Stocks
East Coast	612,700	612,700	100.0	3,335,000	476,400	77.8	8,690,000	7,244,000
Appalachian	141,300	132,500	93.8	654,000	93,400	70.5	1,766,000	1,107,000
Indiana, Illinois, Kentucky	390,800	381,000	97.5	2,079,000	297,000	78.0	5,743,000	3,082,000
Oklahoma, Kansas, Missouri	461,100	412,200	89.4	1,805,000	257,900	62.6	3,468,000	3,727,000
Texas	809,000	743,500	91.9	3,846,000	549,400	73.9	8,088,000	8,096,000
Louisiana-Arkansas	266,600	262,000	98.3	1,039,000	148,400	56.6	1,994,000	2,254,000
Rocky Mountain	150,100	139,700	93.1	340,000	48,600	34.8	1,893,000	829,000
California	898,500	887,600	98.8	3,229,000	461,300	52.0	15,802,000	100,929,000
Total week March 28	3,730,100	3,571,200	95.7	16,327,000	2,332,400	65.3	47,444,000	127,268,000
Total week March 21	3,730,100	3,571,200	95.7	16,079,000	2,297,000	64.3	46,758,000	127,691,000
Total March 29, 1930	3,675,900	3,512,400	95.6	17,436,000	2,490,800	70.9	*54,999,000	*136,057,000
The Texas and Louisiana Gulf Coastal Figures Shown Below are Included Above in the total of their respective districts.								
Texas Gulf Coast	529,500	529,500	100.0	2,921,000	417,300	78.8	6,950,000	5,791,000
Louisiana Gulf Coast	147,500	147,500	100.0	706,000	100,900	68.4	1,805,000	1,213,000

* Revised due to change in California.

MARKET SECTION

HOW LAST WEEK'S DAILY AVERAGE PRODUCTION COMPARES WITH NECESSARY AND NORMAL QUOTA LIMIT

State—	Indicated Demand Second Quarter 1931	Economic Limit Second Quarter 1931	Daily Average Last Week	Daily Excess Last Week	Daily Average Since January 1	Daily Excess Since January 1
Arkansas	58,600	56,000	47,200	—8,800	49,292	—6,708
California	591,500	500,000[1]	525,100	25,100	530,239	30,239
Kansas	118,300	114,000	108,950	—5,050	110,266	—3,734
Louisiana	78,900	71,000	65,900	—5,100	68,763	—2,237
Oklahoma	551,000	465,000[1]	511,550	46,550	487,072	22,072
Texas	798,700	692,000[1]	786,600	94,600	701,108	9,108
Balance of U. S.	254,000	240,000	206,800	—33,200	206,943	—33,057
Total	2,451,000	2,138,000	2,252,100	114,100	2,153,683	15,683

[1]Allowable.

figure of 692,000 barrels, was excessive last week to the extent of 94,600 barrels. Oklahoma and California also show an excess production over allowable of 46,550 barrels and 25,100 barrels, respectively. The excess over rated and indicated allowable production of the United States for last week was 114,100 barrels. On a cumulative basis, however, the excess since January 1 is only 15,683 barrels.

Increases were recorded last week for Texas, outside of Gulf Coast, Gulf Coast, Arkansas and Rocky Mountain States. Decreases occurred in Oklahoma, Kansas, North Louisiana, Eastern States and California. The total production gain for Texas as a whole was 21,400 barrels. In addition to the gain recorded for East Texas of 23,200 barrels, there was also a gain of 2550 barrels in the Gulf Coast and a gain of 1550 barrels in West Texas. These gains were partly offset by decreased output in the Panhandle and Southwest Texas of 4150 barrels and 1600 barrels, respectively.

The demand for crude for the second quarter of 1931 is

Cracked Gasoline Production

Week ending March 28, 1931

(Barrels of 42 gallons)

District	Potential Charging Capacity Total	Reporting	Per Cent	Production Total	Daily Average
East Coast	246,900	222,900	90.3	600,000	85,700
Appalachian	45,900	43,400	94.6	135,000	19,300
Ind., Ill., Ky.	294,200	280,200	95.2	456,000	65,100
Okla., Kans., Mo.	219,900	197,900	90.0	373,000	53,300
Texas	395,500	379,400	95.9	674,000	96,300
Louisiana-Arkansas	109,400	106,900	97.7	235,000	33,600
Rocky Mountain	95,100	95,100	100.0	102,000	14,600
California	182,700	182,700	100.0	292,000	41,700
Total week Mar. 28	1,589,600	1,508,500	94.9	2,867,000	409,600
Total week Mar. 21	1,589,600	1,508,500	94.9	2,904,000	414,800
Total Mar. 29, 1930.		(Not Available)			
The Texas and Louisiana Gulf Coast Figures Shown Below are included above in the totals of their respective districts.					
Texas Gulf Coast.	305,000	300,500	98.5	546,000	78,000
Louisiana Gulf Coast	77,000	77,000	100.0	168,000	24,000

Imports of Petroleum

(Barrels of 42 gallons)

	Week Ended March 28	Week Ended March 21
AT ATLANTIC COAST PORTS—		
Baltimore	183,000	185,000
Boston	28,000	119,000
New York	773,000	"A" 1,139,000
Philadelphia	72,000	240,000
Others	147,000	285,000
Total	1,203,000	1,968,000
Daily Average	171,857	281,143
AT GULF COAST PORTS—		
Galveston District	63,000	.....
New Orleans and Baton Rouge	.....	.....
Port Arthur and Sabine District	.....	.....
Tampa	.....	46,000
Total	63,000	46,000
Daily Average	9,000	6,571
AT ALL UNITED STATES PORTS—		
Total	1,266,000	2,014,000
Daily Average	180,857	287,714
Daily Average Four Weeks Ended	231,357	260,393
Distribution of Total Imports Is as Follows:		
Crude	609,000	1,026,000
Gasoline	242,000	"A" 311,000
Fuel Oil	415,000	677,000
Total	1,266,000	2,014,000

"A"—Revised.

California Oil Receipts

(Barrels of 42 gallons)

	Week Ended March 28	Week Ended March 21
AT ATLANTIC COAST PORTS—		
Baltimore	155,000	.....
Boston	.....	.....
New York	160,000	220,000
Philadelphia	117,000	.....
Others	95,000	.....
Total	527,000	220,000
Daily Average	75,286	31,429
AT GULF COAST PORTS—		
Total	.....	.....
Daily Average	.....	.....
AT ATLANTIC AND GULF COAST PORTS—		
Total	527,000	220,000
Daily Average	75,286	31,429
Daily Average Four Weeks Ended	61,500	49,750
Distribution of Total California Oil Receipts Is as Follows:		
Gasoline	454,000	220,000
Gas Oil	73,000	.....
Total	527,000	220,000

MARKET SECTION

United States Daily Average Production

1930	Oklahoma	Kansas	Texas (Outside Gulf Coast)	Gulf Coast	North Louisiana	Arkansas	Eastern States	Rocky Mountain	California	United States Daily Av.	United States Total
March	622,650	115,500	644,400	206,000	41,600	58,600	132,700	73,600	649,000	2,544,050	78,865,400
April	657,050	122,200	640,950	206,800	42,100	57,800	138,700	75,950	625,700	2,576,250	77,018,100
May	663,300	131,000	662,350	203,900	39,900	53,800	137,150	82,500	623,700	2,597,700	80,529,600
June	665,550	133,600	668,300	210,500	40,300	56,900	135,750	84,600	598,000	2,593,500	77,806,900
July	594,750	121,600	652,350	209,400	40,550	55,400	137,200	98,350	610,450	2,520,050	78,121,200
August	558,850	115,650	646,400	206,600	41,500	55,100	128,550	106,000	611,250	2,470,900	76,597,600
September	558,900	116,550	606,550	200,750	40,150	53,550	121,400	110,650	604,900	2,413,400	72,402,205
October	542,100	114,850	609,500	194,850	41,500	52,800	121,750	104,000	590,800	2,372,150	73,536,350
November	491,550	111,400	579,350	190,100	44,050	52,000	116,400	101,950	601,200	2,288,000	68,639,150
December	459,300	105,550	533,400	189,300	43,000	51,100	112,200	100,500	587,450	2,181,800	67,636,500
1931											
January	452,000	106,350	511,050	188,850	41,100	50,700	110,300	96,700	535,700	2,092,750	64,874,450
February	473,750	114,450	523,700	185,600	43,950	49,950	109,800	100,100	527,300	2,600,600	59,600,450
March*	553,750	114,300	602,600	183,550	41,600	49,100	112,500	98,350	546,250	2,302,000	69,060,600
March 28	552,800	109,300	613,950	177,350	39,700	46,700	110,250	94,900	530,400	2,275,350	15,927,450
April 4	511,550	108,950	632,800	180,450	39,250	47,200	109,500	97,300	525,100	2,252,100	15,764,700
Increase	.....	.....	18,850	3,100	.....	500	.....	2,400	.....	.....	.....
Decrease	41,250	350	.....	.....	450	.....	750	.....	5,300	23,250	162,750

*Preliminary.

Last Week's Daily Average Production by Districts

TEXAS	April 4	March 28
Panhandle District	51,400	55,550
North Texas	57,650	57,800
West Central Texas	25,350	25,350
East Central Texas	192,200	169,000
West Texas	245,050	243,500
Southwest Texas	61,150	62,750
Texas Gulf Coast	153,800	151,250
Total Texas	786,600	765,200
OKLAHOMA	511,550	552,800
CALIFORNIA	525,100	530,400
KANSAS	108,950	109,300

LOUISIANA	April 4	March 28
North Louisiana	39,250	39,700
Louisiana Gulf Coast	26,650	26,100
Total Louisiana	65,900	65,800
ARKANSAS	47,200	46,700
MOUNTAIN STATES		
Wyoming	42,650	40,800
Montana	8,700	8,900
Colorado	4,150	4,200
New Mexico	41,800	41,000
Total Mountain States	97,300	94,900
EASTERN STATES	109,500	110,250
Total United States	2,252,100	2,275,350

Summarized Review of Field Results

State—	Completions This week	Completions Last week	Oil Wells This week	Oil Wells Last week	Gas Wells This week	Gas Wells Last week	Failures This week	Failures Last week	Initial Prod. This week	Initial Prod. Last week
Arkansas	1	6	1	1	..	1	..	4	4	143
California	7	10	6	7	..	..	1	3	2,275	1,495
Illinois	1	3	1	1	..	..	..	2	25	3
Indiana	1	..	..	..	..	..	1	..	...	...
Kansas	6	7	1	3	4	3	1	1	80	1,595
Kentucky	7	23	4	3	1	9	2	11	167	190
Louisiana	14	10	4	3	1	1	9	6	940	3,000
Michigan	1	..	..	..	1	..	..	..	...	...
Mississippi	3	5	..	..	..	1	3	4	...	...
New Mexico	1	..	1	..	..	..	..	..	5,190	...
Ohio	17	15	5	3	9	6	3	6	103	179
Oklahoma	25	19	15	11	6	2	4	6	17,255	44,245
Pennsylvania	4	17	1	8	3	5	..	4	2	31
Texas	112	91	74	50	4	2	34	39	366,612	240,370
West Virginia	13	13	2	..	10	7	1	6	6	...
New York	5	2	..	2	3	..	2	..	...	7
Missouri	..	1	..	..	..	..	..	1	...	...
Total	218	222	115	92	42	37	61	93	392,659	291,258
Increase This Week	..	..	23	..	5	..	..	..	101,401	...
Decrease This Week	4	..	..	..	..	..	32	..	...	...

Comparison of Permits Granted for New Wells

State—	Week Ending April 4	Previous week	This week 1930	Total this Month	This month 1930	Total this year	Total this date last year	1930 year total
Arkansas	..	..	4	..	4	16	33	108
California	6	10	15	6	15	105	199	922
Louisiana	6	7	24	6	24	102	287	948
Kansas	6	5	16	6	16	134	244	944
Oklahoma	21	32	74	21	74	322	757	2,830
Texas	124	122	157	124	157	1,284	2,117	7,052
Total	163	176	290	163	290	1,963	3,737	12,804

MARKET SECTION

placed at 2,451,000 barrels daily for the United States. Since production last week amounted to 2,252,100 barrels and imports are rated at a daily average of about 160,000 barrels, it is seen that the industry is actually withdrawing crude from storage to the extent of 38,900 barrels daily, or about 1,167,000 barrels on a monthly basis. It is apparent, however, that on the basis of allowable production for the United States of approximately 2,138,000 barrels and the same rate of imports, that the designed withdrawal from crude storage would amount to about 153,000 barrels daily or approximately 4,590,000 barrels on a monthly basis. Thus, by maintaining production above the allowable figure the industry is preventing an earlier return of normalcy to the extent of about 3,423,000 barrels per month.

Mid-Continent Market Holds Steady at Low Price Levels

Oklahoma daily production for the week ending April 4 moved down sharply, due to the completion of taking potential output of the fields of the Seminole area. With this work completed there, however, the taking of potentials in the Oklahoma City field was started and this area offset slightly the decrease at Seminole.

The highest output ever reached in the Oklahoma City field was recorded April 3, when 221,786 barrels were delivered to tanks in the course of potential taking. The wells are being gauged over four-hour periods and the greater part of April will be necessary for completing the work.

Despite the higher output, shipments from the field were in excess of output, as runs from the field amounted to 933,800 barrels. The Texas-Sinclair Pipe Line Company, transportation unit for Sinclair Refining Company, is taking about 46,000 barrels daily. This represents production from leases of Sinclair Oil & Gas Company, as well as purchases from other producers.

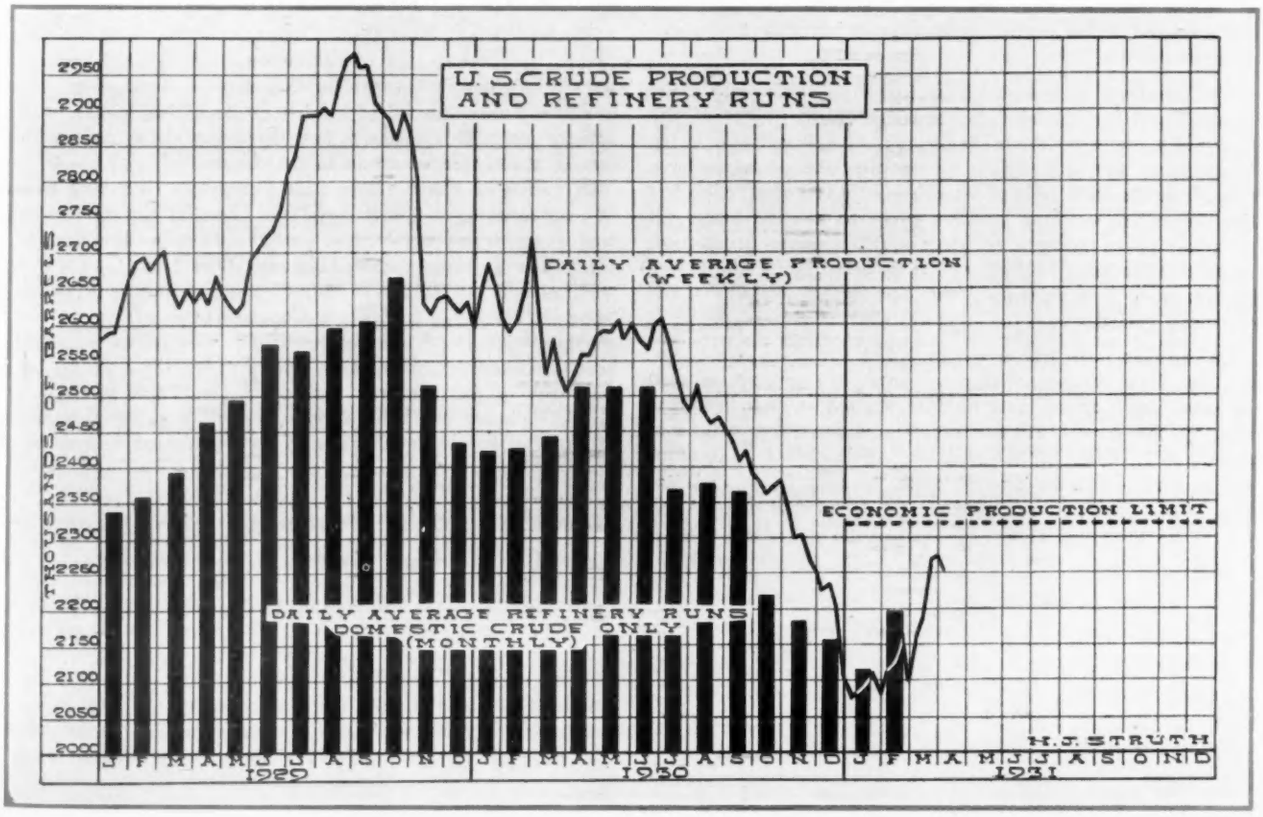
Sale of 700,000 barrels of Seminole oil was announced last week by Indian Territory Illuminating Oil Company. Half of this will be taken by Barnsdall Refineries, Inc., while the other 350,000 will be run by The Texas Company.

Other than the federal court action filed by the Sinclair interests last week to cause the corporation commission to issue its orders after proper hearings, the legal and political situation in Oklahoma has cleared for a period. The legislature entered its final week with no oil legislation on its calendar. Numerous bills relating to oil production had been introduced but none came into laws.

There is yet the conference in Washington, which the Oklahoma governor has branded as certain to aid the oil producers of the Mid-Continent. Governor Murray says he expects this conference to result in an inter-state oil compact.

Within itself, the petroleum industry in the Mid-Continent has held its ground over the week. Prices have been stable at their low levels, with few instances of selling crude oil at below-market prices.

Some hope from seasonal betterment is evident. Refiners are calculating that with a four-cent price for gasoline they



MARKET SECTION

can keep operating with crude oil at its present figures. But much gasoline of U. S. motor grade continues to sell lower than four cents. It is the contention of the larger refiners, however, that four cents shortly will become the lowest price of this grade of gasoline and leave the price structure in position to move into profit-making ranges during the summer.

Some further demand for Oklahoma oil is indicated with the completion of the pipe line of the Union-Gulf Pipe Line Company. Work on the lateral from Dublin, Indiana, to near Cincinnati, 51 miles has been started. Gulf Refining Company will draw oil from the Mid-Continent for its three new plants at Cincinnati, Toledo and Pittsburgh.

California's Crude Price Schedule Causes Comment

California's "upside down" crude price schedule has caused a lot of comment, as such an unusual arrangement might be expected to cause; but there is a belief that the light grades will soon be commanding at least as much as the heaviest grades. A flat price of 35 cents for the best grades and a top price of 65 cents for some of the heavy grades prevails in the Los Angeles basin are based on the theory that light oil simply hasn't much value with gasoline retailing at 10½ cents.

The present low prices of gasoline seem temporary and for that reason crude prices should not follow such extremes, the smaller operator contends. It is further emphasized that during the greatest period of over-production a high crude price schedule was maintained in the face of a limited demand, while at present a very low price has been posted when crude production is actually below requirements.

The producer of heavy oil has had little to do with over-production. He has suffered because of the faults of the light oil producers. With his product bringing nearly twice as much as that of the light oil operator, he seems to have come into his own. It is still too early to determine whether the present set-up is a genuine effort to aid the heavy oil producer or an attempt to force a still smaller production so that stocks may be reduced. In such an event, the heavy oil producer is accidentally the beneficiary during an adjustment period.

California's potential is too high but the state could produce at least 50 per cent more than the present output. An absolute potential of 850,000 barrels is believed correct by the conservative engineers, while other estimates run up to 1,100,000 barrels. Various fields have a large number of wells shut in. The potential of such fields as Long Beach and Elwood seems entirely too high; but it can not be doubted that they can produce far above the present totals.

The present low gasoline prices do not resemble "price wars" of the past. The average dealer and customer have become somewhat reconciled to the low prices and take them as a matter of course. A retail price of around 15 cents in the Los Angeles territory is expected when the present extremes pass. The increase probably will come over night.

California Allowable Remains 500,000 Barrels

Los Angeles.—The allowable output for California will remain at 500,000 barrels during April, according to H. P. Grimm, umpire. Potential of all fields in the state is placed at 1,110,000 barrels, the allotment of 500,000 barrels daily representing 54.95 per cent of potential. It was pointed out by Mr. Grimm that the potential of California continues to show signs of decline, the April figure being 11,000 barrels under that of March. A summary report of operations for California for February shows that there were 2636 leases, 9199 producing wells and 7583 idle wells. The total number of wells in the state amounted to 16,779. The largest number of producing wells are located in the Midway-Sunset field, numbering 1845. Long Beach is credited with 819 producing wells; Coalinga, 814; Kern River 789; Ventura 503. The Playa del Rey field is credited with 173 wells of which 150 are producing and 23 are idle. The potential of this field is given as 48,840 barrels daily.

East Texas Prices Lower As Production Increases

Twenty-five cent prices for East Texas crude at the well became more general early this week as the supply rapidly advanced to new peak levels, while purchases by independents began lagging under the strain of railroad congestion and other causes. Acceptance of the above low price for 38 to 40 gravity sweet crude by operators has become necessary to obtain market relief, and no oil is being bought direct by major companies although two are operating trunk lines, while others have tank car racks for the handling of controlled oil only.

Sinclair-Texas Pipe Line Company is reported to have curbed its purchases of crude on the strength of the success scored by Sinclair Oil & Gas Company in developing a big production with the aid of air lift on its Holland lease in the Joiner field. This concern has heretofore been among the largest purchasers of crude in the district.

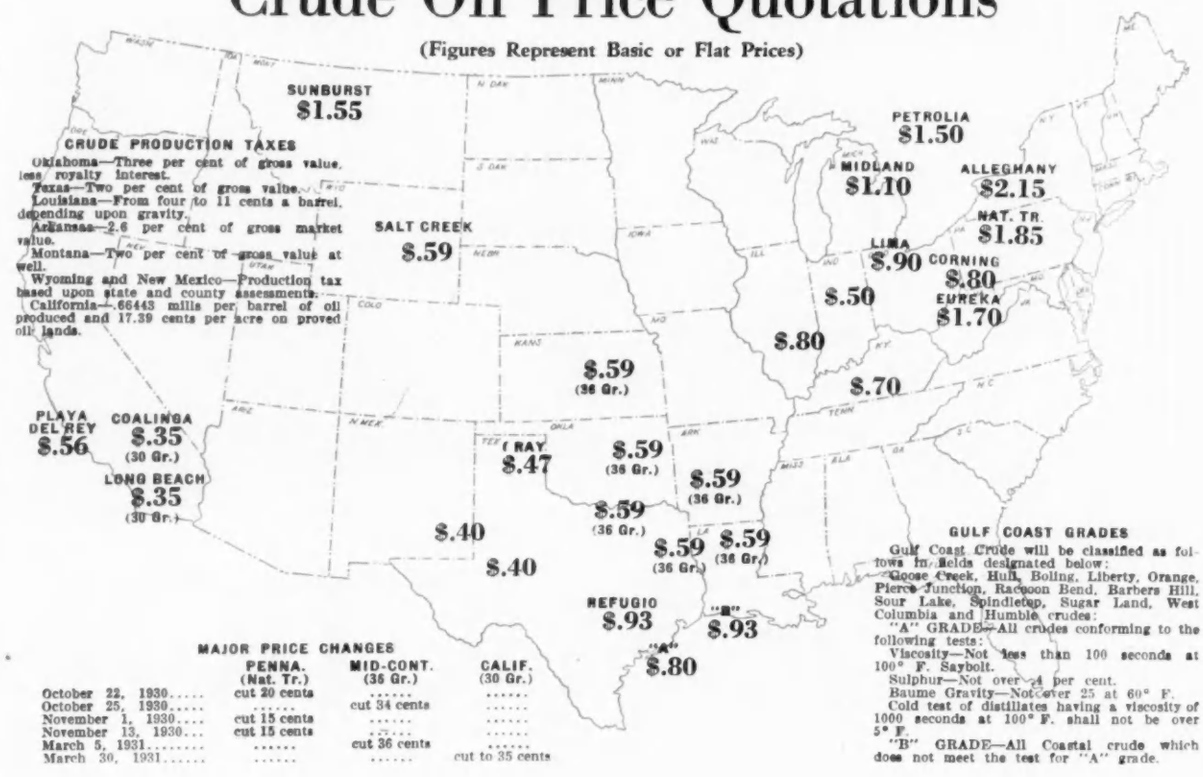
Operation of Humble Pipe Line Company's eight-inch trunk line connection into the Kilgore field began at the start of the new week, and shipments were immediately stepped up to about 17,000 barrels daily, while Magnolia Pipe Line Company is moving about 20,000 barrels daily through its 10-inch trunk line. Should Humble Oil & Refining Company taper off on tank car shipments other operators in the Kilgore and Joiner fields will benefit accordingly, as regular shipments of about 24,000 barrels daily by this concern's rack on the main line of the I. & G. N. Railroad has heretofore restricted tank car movement of other operators with racks on the Henderson branch line.

Gasoline Stocks Decline: Less Crude Run to Stills

For the first time this year, gasoline stocks have recorded a decline. Figures collected by the American Petroleum Institute as of April 4 show that stocks of gasoline at refineries in the United States declined from 47,444,000 barrels to 46,076,000 barrels, a net decrease of 1,368,000 barrels between March 28 and April 4. Accordingly, it is believed that 47,000,000 barrels will have marked the peak of gasoline stocks for this year.

Crude Oil Price Quotations

(Figures Represent Basic or Flat Prices)



CRUDE PRODUCTION TAXES

Oklahoma—Three per cent of gross value, less royalty interest.
Texas—Two per cent of gross value.
Louisiana—From four to 11 cents a barrel, depending upon gravity.
Arkansas—2.6 per cent of gross market value.
Montana—Two per cent of gross value at well.
Wyoming and New Mexico—Production tax based upon state and county assessments.
California—66443 mills per barrel of oil produced and 17.39 cents per acre on proved oil lands.

MAJOR PRICE CHANGES

	PENNA. (Nat. Tr.)	MID-CONT. (36 Gr.)	CALIF. (30 Gr.)
October 22, 1930.....	cut 20 cents	.....	.....
October 25, 1930.....	.....	cut 34 cents	.....
November 1, 1930....	cut 15 cents	.....	.....
November 13, 1930...	cut 15 cents	.....	.....
March 5, 1931.....	.....	cut 36 cents	.....
March 30, 1931.....	.....	.....	cut to 35 cents

GULF COAST GRADES

Gulf Coast Crude will be classified as follows in fields designated below:
Goose Creek, Hull, Boling, Liberty, Orange, Pierce Junction, Raccoon Bend, Barbers Hill, Sour Lake, Spindletop, Sugar Land, West Columbia and Humble crudes:
"A" GRADE—All crudes conforming to the following tests:
Viscosity—Not less than 100 seconds at 100° F. Saybolt.
Sulphur—Not over .4 per cent.
Baume Gravity—Not over 25 at 60° F.
Cold test of distillates having a viscosity of 1000 seconds at 100° F. shall not be over 5° F.
"B" GRADE—All Coastal crude which does not meet the test for "A" grade.

Official Postings and Differentials

(Revised to April 7, 1931)

California: (Prices effective March 30).

In all **Los Angeles Basin** fields (except Playa del Rey) oil from 14 gravity to 20.9 gravity is 65 cents. Deduct 3 cents for each degree up the scale to 30.9, making this the lowest at 35 cents. Fields in this group include **Alamitos Heights, Long Beach, Seal Beach, Torrance, Athens, Rosecrans, Dominguez, Santa Fe Springs, Montebello, Huntington Beach, East Coyote, Richfield** and **Brea-Olinda.**

Playa Del Rey: 56 cents flat, 20-26 gr.

In the **San Joaquin Valley** fields, 11 to 11.9 gravity crude is 50 cents per barrel, 14 to 14.9 gravity, 55 cents. Differential of 2 cents off each degree up the scale makes 30 gravity and above 35 cents per barrel. Fields in this group include **Coalinga, McKittrick, Kern River, Sunset-Midway, Elk Hills, Buena Vista Hills** and **Lost Hills.**

Santa Paula 14 to 19.9 gravity, 60 cents; 20 gravity, 58 cents; 21 gravity, 56 cents, and take off 3 cents for each degree up to and including 28 gravity. **Orcutt** 14 to 19.9 gravity, 55 cents, and take off 2 cents for each degree up to and including 29 gravity which is 35 cents.

Oklahoma-Kansas-North Texas: (Effective March 5, 1931). Below 29 gravity 43 cents with differential of 2 cents to 40 and above. Magnolia Petroleum Company posts 40 cents for below 26 gravity with differential of 1 cent to 29 gravity, 43 cents. From 29 to 40 and above, same schedule as foregoing. North Texas posting applies to oil produced in **Wichita, Wilbarger, Archer, Northern Young** and **Van Zandt** Counties. Also includes **Ranger, Mexia, Powell, Boggy Creek, Richlard, Wortham, Currie, Moran** and **Nocona** crudes.

Texas Panhandle: (Effective March 10, 1931).

Gray County: Below 35 gravity 43 cents with differential of 2 cents to 40 and above. **Carson-Hutchinson Counties.:** Below 35 gravity 38 cents with differential of 2 cents to 40 and above.

East Texas: (Effective March 26). Same scale of prices as Oklahoma-Kansas-North Texas.

West Texas and New Mexico: (Effective Mar. 10, 1931) Flat price of 40 cents a barrel for Winkler, Pecos and Lea, (N. M.). Flat price of 35 cents a barrel for Crane, Upton, Howard, Ector, Ward, Loving, Crockett, Mitchell and Glasscock Counties.

Southwest Texas. (Effective Mar. 10, 1931).

Refugio: Heavy oil, below 25 gravity, 69 cents; Light crude, 25-25.9 gravity, 71 cents with differential of 2 cents to 40 and above. **Mirando,** 69 cents; **Salt Flat** and **Darst Creek,** 60 cents; **Pettus,** 95 cents; **Luling** and **Corsicana heavy,** 45 cents.

Gulf Coast. (Effective Mar. 10, 1931).

Grade "A": 80 cents a barrel; **Grade "B"**—below 25, 69 cents with differential of 2 cents to 40 and above. **High Island,** 75 cents; **Jennings,** 80 cents; **Markham,** 50 cents.

North Louisiana and Arkansas.

Pine Island, Haynesville, Bull Bayou, El Dorado, Cotton Valley, Zwolle: Below 29, 43 cents with differential of 2 cents to 40 and above. Magnolia Petroleum Company posts 40 cents for below 26 gravity with 1 cent differential to 29 gravity, 43 cents. From 29 to 40 and above, same schedule as foregoing. **Stephens:** Below 29, 54 cents with differential of 4 cents to 32 and above. **Smackover,** 45 cents; **El Dorado east field** 70 cents; **Bellevue,** 45 cents.

North Louisiana and Arkansas. (Effective Mar. 10, 1931).

Salt Creek: 29-29.9 gravity 45 cents with differential of 2 cents to 37 and above. **Elk Basin** and **Grass Creek,** 90 cents; **Big Muddy,** 65 cents; **Lance Creek,** 98 cents; **Rock Creek** 66 cents; **Mule Creek,** $1.20; **Rex Lake,** $1.10; **Osage,** 50 cents; **Cat Creek,** $1.25; **Pondera,** $1.45; **Sunburst,** $1.55; **Hogback, N. M.,** $1.40.

Eastern States: (Effective November 13, 1930).

Bradford, Allegany district, $2.15; **National Transit** oil, $1.85; **Southwest Pennsylvania** oil, $1.80; **Eureka P. L. (W. Va.),** $1.70; **Buckeye P. L.** oil, $1.45; **Corning** crude, $1.15; **Somerset** in **Eureka Lines,** 75 cents; **Ragland,** 60 cents; **Oil City, Ky.,** 70 cents.

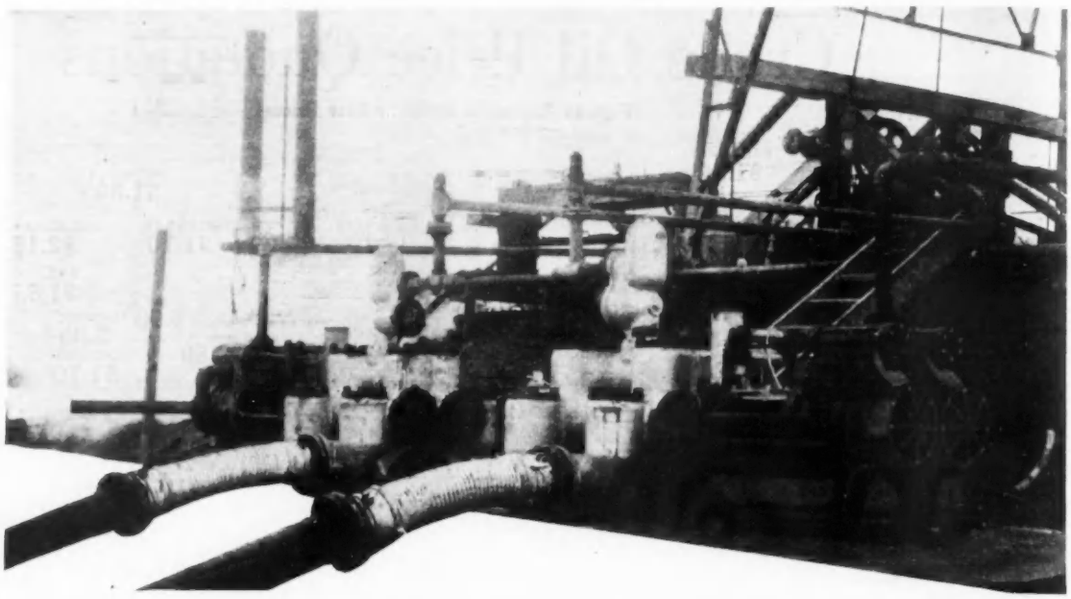
Michigan—Midland, $1.10; **Muskegon,** below 29 gravity, 65 cents with differential of 4 cents to 35 gravity; 31-31.9, 92 cents with 3 cent differential to 44 gravity and above.

Central States: (Effective March 5, 1931).

Wooster, 99 cents; **Lima,** 90 cents; **Waterloo,** $1.20; **Indiana,** 50 cents; **Princeton,** 80 cents; **Illinois,** 80 cents; **Western Kentucky,** 75 cents.

Canada: (Effective October 28, 1930).

Petrolia, $1.50; **Oil Springs,** $1.57.



NEW

SIDE SUCTION

Wilson-Snyder Slush Pumps

Wilson Supply Company Store at Joinerville, Texas

Through this and our other store at Kilgore, operators in the booming East Texas Field are assured a source of supplies from which to obtain quick, accurate service. Wilson-Snyder Pumps stocked at both stores.

Increased Pumping Efficiency

Direct flow from slush pit to pump through a flexible couple that absorbs jarring shocks and strain. All destructive vibration has been eliminated. Wear and tear on the pump is reduced.

The 10″ suction opening on either side without ells or sharp turns allows pump to fill quicker with more rapid distribution of fluid to valves. Fluid ends are tested to 3000 pounds pressure.

Side-suction is exclusively Wilson-Snyder. It is an advantage that goes far toward increasing pumping efficiency; giving longer life; reducing parts replacements, and saving time, expense and trouble.

Wilson

SUPPLY COMPANY

Oil & Gas Well SUPPLIES

BRANCHES

Luling, Beaumont, Pettus, Barbers Hill, Kilgore, Joinerville, Texas and Shreveport, La.

MAIN STORE

1412 MAURY ST., HOUSTON, TEX.

EAST TEXAS YIELD EXPECTED TO EXCEED BILLION BARRELS
(Continued from page 26)

ly be placed somewhat farther east in instances where there are as yet no dry holes marking the eastern boundary. But it roughly gives a picture of what is to be expected.

The north and south limits of the field are still unknown, as indicated on the map by the question marks. The north end (in Gregg County) must necessarily be narrow, because it must be confined at least between Mrs. Mamie Hammond et al's J. M. Hamby 1, which failed to obtain the oil sand, and Tips DeArmand-Capps et al's Charles Cobb 1 to the west beyond the Upshur County line, the latter having showed salt water along with oil and gas in the expected oil horizon. Although it is considered likely that the field may come to an end in that general vicinity, it is conceded that it may continue on with reduced width or even that it may again widen out.

Western Limit Unknown

Like the north and south ends, the western limit of production is also unknown. The line indicated as the west extent of proven area is only a general line based on the three most westerly wells of the Joiner, Kilgore and Longview areas, and subject to being moved partly eastward or wholly westward; for there is nothing to condemn territory still farther west. Only future drilling can determine definitely the western edge of the field.

The most westerly well of the Joiner area, Guy V. Lewis et al's S. S. Cook 1, gave that pool total width of 5½ miles, extending it into Smith County. It came in as a 15,000-barrel producer at 3675-3696 feet, one of the best wells of the field. Burton Drilling Company-Sabine Syndicate's E. B. S. Florey 1, a 10,000-barrel well, gave Kilgore field its present maximum width of about 2½ miles. Selby Oil & Gas Company's P. J. Snaveley 1 near Gladewater last week virtually assured width of five miles for the Longview field, coring two separate oil saturated sands that correlate closely with nearest wells in both Longview and Kilgore fields. An excellent producer is predicted, based on the recovered cores.

Merging of the Joiner and Kilgore pools is regarded as very likely, particularly since McMillan-Rush et al's W. B. Thompson 1, John Darley Survey, Rusk County, recently came in as a large producer, extending the Joiner area northward about 1½ miles. Widening of that portion of the Joiner area is in prospect, Vitex Company's (Pearl Oil Company's) Eaton 1, being near the expected sand, while Ward's Thrash 1 had 20 feet of sand and will probably be a large producer. In the meantime considerable interest is centering on Morefield Drilling Company and Head's J. Ector 1, which lies between proven areas of the Joiner and Kilgore pools, and which will contribute toward further outlining the east edge of production. It has been reported as running structurally high, with possibility of being too far east for production.

Just as the Joiner and Kilgore pools appear fairly certain to merge, the Kilgore and Longview areas likewise give strong indication of uniting, since Harry W. Elliott et al's S. G. Andrews 1 came in the past week as a good producer. It gave the Kilgore productive area a south-north extent of about six miles, advancing the field within about six miles of the most southerly production of the Longview pool.

Further information as to width and west extent of the Kilgore area is in prospect for the near future, for Rosenfield et al's Knowles is approaching the sand, while Vitex Syndicate's Osborne 1, about a mile farther east is also drilling.

In the interesting north portion of the Longview field, where E. E. Eslick-Little et al's Springfield Church 1 recently extended production northward, there are now two wells drilling which will furnish information as to the width of the productive area in that vicinity. One of these, Sultan Oil Company's S. F. Thrash (Stucky) 1, has topped the sand and set casing; and Mudge Oil Company is drilling Richardson 1, farther west, across the county line in Upshur County.

Several miles north of this area, where possible productive territory is limited between the Hammond and the DeArmand wells, is located the very interesting test of E. E. Eslick et al on the Nicholson land, M. Mann Survey, Gregg County, near the Upshur County line. It will give an indication as to further extension of the field to the north.

Three Companies Start Tank Car Shipments from Longview

Tyler, Texas.—Three concerns began tank car shipments of crude from the Longview field during the past week, with tank car loadings taking place at Willow Springs, on the main line of the Texas Pacific Railroad. Four racks are now in operation on the latter railroad, which has greater transportation facilities than any line in the district because of the modern freight yards at Longview. However, crude shipments will not be as great as originally expected, as a large portion of the loadings are destined for Texas Gulf Coast points, and to obtain the 11 cents per 100 pounds tariff on tank car movement the cars must be routed via the I. & G. N. through Longview, Kilgore and Overton, or through the worst congested section of the district. Both lines are part of the Missouri Pacific System, and a higher rate will apply if a different route to the coast is taken.

Independent Pipe Line Company, Shell Petroleum Corporation and Simms Oil Company made first crude shipments from their racks at Willow Springs. The former is making deliveries from outside connections obtained in the Longview field to Texas Coastal and Louisiana points, while Shell Petroleum Corporation is dispatching all of its crude to its plant on the Houston Ship Channel, near Houston. Arkansas Fuel Oil Company has been shipping to an affiliated refining unit at Shreveport, but will have a direct pipe line connection within 60 days.

Santa Fe Railroad has made a bid for crude hauls from the Longview field, having obtained a 11 cents per 100 pounds rate to Beaumont and other Coastal points, with East Texas Refining Company the only shipper at present. The Cotton Belt Railroad has been authorized to apply the same rate on crude shipments originating between Tyler and Winona stations, inclusive, to Houston, Galveston, Texas City, Baytown, Beaumont, Orange, Port Arthur, Sabine, Sabine Pass, and to Points on the Texarkana & Fort Smith Railroad south of Beaumont. Cotton Belt also has a rate of 11 cents per 100 pounds from Tyler and Amigo to Dallas and Fort Worth; and 13 cents per 100 pounds from Winona and Chandler, inclusive, to Angus and Minerva, Texas. Tyler Pipe Line Company and Houston Oil Company have racks on the Cotton Belt, with pipe line connections to the Rusk County oil area.

PRORATION DEVELOPS COMBINATION HEAD FOR FLOWING WELLS

(*Continued from page 47*)

operators have resorted to the practice of flowing wells through smaller strings of casing in an effort to reduce the amount of gas produced with each barrel of oil and to maintain a slight back pressure on the sand. Among these is Deep Rock Oil Corporation which has recently tubed a number of wells under pressure by use of Cameron Iron Works' manually operated tubing head.

Since allowable production is based on a percentage of the well potential it is advantageous to the operator to so equip wells that maximum production can be obtained in the short time allowed for taking potential tests. The engineer must then have two principal objectives in designing an efficient flow connection. An arrangement must be made whereby the well can be produced at maximum rate for a limited time and additional connections must be provided for continuous flow while securing production allowable under the specified percentage of potential. For this reason C. O. Moss, chief engineer for Deep Rock Oil Corporation, has designed several connections for use on the company's wells in the West Asher-Wanette pool. Figure 1 shows the detail of one hook-up on the lease. Control of flow has been worked out almost to the exactness that might be expected only in laboratory experiments. The well may be produced wide open or it may be pinched to a few barrels per hour or a few drops.

The Hook-up

A six-inch flow line has been welded into the eight-inch casing below the derrick floor and tubing run into the well under pressure with the C. I. W. head. The six-inch line runs directly to the separator and is so constructed that all right angle turns have been eliminated by the use of welds at obtuse angles. This promotes piston type flow by decreasing friction and tends to reduce the back pressure which results through decreasing the flow from eight-inch in the well to six-inch above the derrick floor. When potential tests are to be taken the tubing is shut-in by closing gate A. After maximum flow has been obtained and the well potential established, gate A is opened and the six-inch gate in the flow line closed. The well is then in condition to be produced at any desired rate. With gates B and C open and D closed the flow is controlled by the Shaffer flow bean. If for any reason the flow bean must be removed, gate D can be opened and C closed, giving a straight tubing capacity flow with all right angle turns eliminated. All contingencies have been provided for. Should the well cease flowing the bull plug in the top of the tubing can be removed so that a swab or paraffin augur may be introduced. Pressure on the tubing is released by opening the casing and conducting any chance flow through the six-inch flow line. This would prevent the possibility of blowing tools out of the hole while working through the tubing. In the event that the operators should desire to experiment with tubing submergence by raising or lowering that string, the upper two-inch flow connections can be removed at the flanges and operations conducted against pressure with the C. I. W. head.

A committee of engineers employed by companies in the field has agreed to co-operate in the matter of design of flow connections and it is not unlikely that the design described herein contains a number of features that will be accepted by other companies.

AMERICAN EXPORTERS YIELD GROUND IN FACE OF SOVIET

(*Continued from page 22*)

U. S. foreign sales of crude oil declined by 10 per cent to a total of 23,704,000 barrels. Canada continued as our best customer for crude, but her purchases were reduced by 3,500,000 barrels to a total of 18,967,000 barrels, Venezuelan, Colombian, and Peruvian oil exports to the Dominion probably having gained to the approximate extent of our losses.

U. S. foreign trade in kerosene declined by 16 per cent and amounted to only 16,681,000 barrels during 1930.

It is interesting to watch the ebb and flow of economic and political tides, as revealed in these statistics. China, for example, impoverished by the collapse of silver exchange, was forced to curtail her purchases of American kerosene by 884,000 barrels last year. On the other hand, the boycott of British oil companies by the nationalist followers of Mahatma Gandhi doubtless accounts for substantial gains in the volume of kerosene sold in the Indian Empire by American firms during 1930.

U. S. export trade in gas and fuel oil declined from 35,715,000 barrels in 1929 to 32,368,000 barrels last year. Japan, Chile, and the United Kingdom, in the order named, are the best U. S. customers for oils in this classification.

Figures used in the preparation of this article include the following, taken from the March 26, 1931, issue of the Statistical Bulletin of the American Petroleum Institute.

Exports of crude oil and refined products:

	Barrels
1922	72,873,000
1923	100,415,000
1924	115,585,000
1925	111,798,000
1926	128,806,000
1927	137,050,000
1928	149,360,000
1929	157,768,000
1930	151,552,000

Imports:

Year	Crude Oil	Refined Products	Total Barrels
1926	60,382,000	20,902,000	81,284,000
1929	78,933,000	29,632,000	108,565,000
1930[a]	62,129,000	43,381,000	105,510,000

[a]Note increase in refined products, and decrease in crude oil imported.

Total domestic production:

1929	1,062,649,000
1930	950,690,000
(Indicated curtailment of domestic production	111,959,000)

Indicated domestic consumption and exports:

1929	1,103,058,000
1930	1,079,496,000
(Indicated decline in total American oil sales, domestic and foreign	23,562,000)

Total U. S. stocks of crude and refined products:

December 31, 1926	526,140,000
December 31, 1929	689,166,000
December 31, 1930	665,870,000
(Decrease of stocks, December 31, 1929, to December 31, 1930	23,296,000)

East Texas Allowable From 90,000 to 130,000 Barrels

Austin, Texas.—An order issued by the railroad commission, April 4, places the prorated allowable of East Texas to begin at 90,000 barrels daily, effective April 10. The proration order calls for increases of 8000 barrels from May 1 to May 15 and from May 15 to June 1, and 12,000 barrels from June 1 to June 15 and from June 15 to July 1, until a maximum allowable of 130,000 barrels daily is reached.

The order defines a division of East Texas into three areas, as follows: 1—Henderson area shall include all acreage in said district in Smith and Rusk Counties lying south of the line running east and west through the center of the present post office in the town of Overton, provided that a lease or property cut by such line shall be treated as lying wholly in the Henderson area, if more than 50 per cent of its acreage lies south of said line, and otherwise wholly outside of such area; 2—Kilgore area shall include all acreage lying north of the north line of the Henderson area as above defined and south of the Sabine River, and 3—Longview area shall include all acreage lying north of the Sabine River.

Following is the allowable production for each of said areas during the period of the order:

	From Apr. 10, 1931, to May 1, 1931	From May 1, 1931, to May 15, 1931	From May 15, 1931, to June 1, 1931	From June 1, 1931, to June 15, 1931	From June 15, 1931, to July 1, 1931
To the Henderson area	40,000	42,000	44,000	48,000	52,000
To the Kilgore area	35,000	37,500	40,000	44,000	48,000
To the Longview area	15,000	18,500	22,000	26,000	30,000
Total	90,000	98,000	106,000	118,000	130,000

East Texas Supporters of Proration Like Van Plan

Longview, Texas.—Supporters of the proration movement in East Texas plan to insist on a proration plan somewhat similar to that being used in the Van field, with both acreage and potential production used as a basis for arriving at allowances. Plans are to force all well owners to standardize on 2½-inch tubing, which is now in general use, while actual gauges for potential flow of wells will be through chokes. The principal purpose in arriving at potentials on a restricted flow basis is to eliminate huge potential totals for each of the three areas, as inflated figures have had a depressing effect on the crude market in general. It is quite likely that 40-acre units will be applied, as smaller units have a tendency to promote development work. Van operators recently changed from 20 to 40-acre units for this reason.

In contrast to operators in other prorated areas in Texas, the East Texas operators are of divided opinion as to the advisability of clamping down the lid on production, and will attempt to enlist the aid of the courts to obtain relief from same.

R. D. Parker, chief supervisor of the oil and gas division of the Texas Railroad Commission, has ordered a meeting of Joiner field operators to be held at Henderson on the morning of April 8 to start preliminary work on the proration movement, while an afternoon meeting is scheduled to be held at Longview for the same purpose in connection with the Kilgore and Longview fields. Greatest opposition to proration is expected to develop from Joiner field operators, who are protected by long time crude contract sales in many instances, while independent companies and individuals predominate.

East Texas Operators to File Injunction Against Proration

Austin, Texas.—Following issuance of an order by the railroad commission setting a limit of 90,000 barrels daily for East Texas, former Governor Dan Moody, attorney for East Texas interests, announced that he will file injunction proceedings against the railroad commission in an effort to restrain the enforcement of proration.

East Texas interests have taken the position that the nine umpires appointed by the commission to enforce proration in Texas are enforcing the laws of the state while they receive an income from private interests. C. V. Terrell, chairman of the commission, stated that a request would be made to Governor Sterling for funds with which to pay a technical advisor and also the umpires appointed by the commission. He also stated that umpires appointed in the future would be selected without recommendation of any other than officials of the state.

Texas Schedule Calls for Total of 691,981 Barrels

Austin, Texas.—Following issuance of the initial proration order for East Texas, the railroad commission ordered that the state production limit for the period beginning April 4 and ending September 30, 1931, must not exceed a total of 691,981 barrels. The revised proration order which was made retroactive to April 4 limits crude production of the various producing areas of the state as follows:

	Barrels
Panhandle	37,000
North Texas	63,000
West Central Texas	63,000
West Texas	213,431
East Central Texas	52,050
East Texas	90,000
Southwest Texas	63,000
Gulf Coast	140,000
Total	691,981

The new order also states that common carrier pipe lines are authorized by the commission to make such sales, leases, loans or exchange of facilities, equipment or oil as may be necessary or convenient in carrying out the purpose of the order and in accomplishing and promoting the ratable or proportionate taking of oil from various properties within any given field. It also authorizes common carrier pipe lines to refuse to accept tenders of crude oil for transportation in excess of the allowable production of crude oil allotted to each lease or property according to the umpire's schedule of allowable production for each field or district.

Industry's Preliminary Report On Economic Position is Filed

New York.—The sub-committee of oil company statisticians of the American Petroleum Institute's Division of Refining committee on refinery statistics and economics has filed with the committee a preliminary report on a survey of the petroleum industry's statistical and economic position for the period April 1 to September 30, 1931. The report was filed by Chairman John D. Gill, Atlantic Refining Company, Philadelphia, with Chairman R. C. Holmes, The Texas Company, New York, on March 27, one day ahead of schedule.

The preliminary report, consisting of six legal size pages, covered crude oil requirements, gasoline production, shipments and stocks, and other detailed information and may be expanded to 10 pages when the final report, with recommendations, is filed with the main committee at St. Louis, on April 14.

The sub-committee held preliminary meetings at New York on March 4 and 11 and on March 16 went into a working session which lasted through March 26. The group met again in New York April 7 and will meet in St. Louis April 13.

Contract Awarded for Seventh Link of Gas Line to Chicago

New York City.—The seventh link of the natural gas pipe line from the Texas Panhandle to Chicago, running from Rock Island to Joliet, Illinois, has been awarded to Ford, Bacon & Davis, Inc.

The seventh section of 155 miles will be made of 24-inch pipe, the standard size employed throughout the line, and will cross the Fox River and the Illinois-Mississippi Drainage Canal. At Joliet the line will connect with the Chicago Belt Distribution System which serves greater Chicago and adjoining territory.

A feature of the contract awarded by Continental Construction Company, sponsors of the project, is the bonus or penalty provision which states that Ford, Bacon & Davis, Inc., will receive a bonus for each day deducted from the 90 days allotted for construction of the last link and also a penalty for each day over the allotted time. Because of the time allotment, a large amount of equipment will be used on the job. A total of about 100 tractors, trucks and ditching machines will be used to transport material and place in position the 45,000 to 50,000 tons of steel pipe and fittings required.

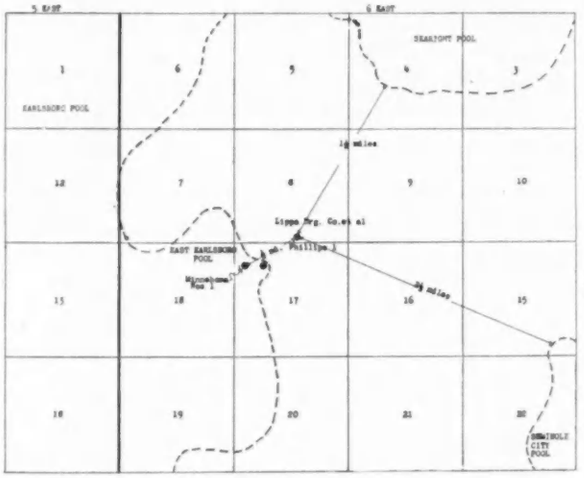
In the path of the line are hundreds of farm drains which will have to be removed and replaced. Two river crossings are included in the last link. Hundreds of men will be employed to finish the section on time.

When completed the Texas-Chicago line will serve natural gas to about 50 cities and towns along its route. Estimated reserves of the line are 7,000,000,000,000 cubic feet. These reserves are the property of the nine large utility and oil companies which formulated the plans of the project and organized Continental Construction Company. These companies are Cities Service Company, Standard Oil Company of New Jersey, Insull & Son, Inc., The Texas Corporation, Columbian Carbon Company, Skelly Oil Company, Phillips Petroleum Company, Southwestern Development Company and United Carbon Company.

Seminole Producer May Mark New Distinct Area

Tulsa.—Lippa Drilling Company et al have 1500 feet of oil in the hole in Phillips 1, SE SW SE Section 8-9n-6e, one-half mile east of East Earlsboro pool in Seminole County. The test has been watched with considerable interest since it penetrated top of the Viola lime structurally as high as producing wells in the East Earlsboro pool. Wilcox sand was encountered at 4218 feet and first oil at 4235 feet. Present total depth is 4242 feet. No further drilling will be done until the well has been shut in 16 days to satisfy a proration requirement.

Structural conditions cannot be definitely determined at this time and it is problematical as to whether the new showing is



an extension of the East Earlsboro pool or on a separate structure. Wells on the southeast edge of that pool nearest the Phillips well found a variable condition in the sand, one being an 8000-barrel completion while its east offset was good for only about 700 barrels.

Gas Sand Is Encountered In North Mexico Wildcat

McAllen, Texas.—After having encountered a gas showing, Compania de Petroleo Mercedes, subsidiary of Standard Oil Company of New Jersey, is reported to be drilling ahead in Rio Bravo 1, wildcat located in northern Tamaulipas, Mexico, 17 miles due south of Sam Fordyce, Texas, and 18 miles southwest of Reynosa, Mexico, the latter town being across the Rio Grande from McAllen, Texas.

This well attracted considerable interest recently when it cored sand at 2068-2071 feet which showed considerable gas. Although it was reported that a drill stem test would be made, information regarding that proposed test is not available, and it has been reported that the well is now being drilled deeper.

The location was made following favorable indications of a structure obtained through geophysical work, and the heavy rotary rig and tall steel derrick which are being used demonstrate the intentions of the company to make a deep test of the well. The machinery which is employed includes two large Diesel oil engines. At depth of 1410 feet from the rotary floor a string of 13⅝-inch casing was set in 18-inch hole.

Personal Mention—Men You Know

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Fred H. Hamilton, who was manager of the land department of Barnsdall Oil Company of California for five years, has resigned to become an independent operator. He was succeeded by R. A. Broomfield, Jr., son of the president of the California subsidiary, who will be temporary manager of the land department.

J. A. Bermingham, vice-president of The Texas Company of California, has been elected temporary chairman of the organization which is discussing plans for oil curtailment in the Lost Hills district.

R. A. Broomfield, president of Barnsdall Oil Company of California, has been elected executive vice-president of Barnsdall Corporation. He had been a vice-president of the parent organization for some time.

Louis Chappuis, consulting geologist, has accepted a position with the Kettleman Hills Petroleum Syndicate, but will continue to do consulting work. He has moved his office to Pacific National building, Los Angeles.

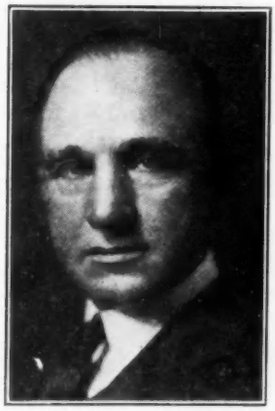
George W. Nillson of Los Angeles has been appointed chief counsel for the Kettleman North Dome Association, which is developing nearly one-half of the acreage on the North Dome at Kettleman Hills under the unit plan of operation. He has been counsel and special counsel for leading independent oil companies for several years.

Robert W. Phelps, consulting petroleum engineer, has moved his offices from Brea and Venice to Los Angeles, the new address being 630 Security building. Phelps is perhaps best known as the co-author of the hand book, "Petroleum Engineering." He spent 18 years with major oil companies, both in the field and executive offices and is known as an expert on the spacing of wells.

Herman Stabler, Washington, D. C., chief of the conservation division of the U. S. Geological Survey, spent several days in the Casper offices of the survey early last week. He visited both the Salt Creek and Teapot Dome fields.

R. W. Sole, representative in the Rocky Mountain states for Benedum-Trees interests, has been transferred from his headquarters in Thermopolis, Wyoming, to Wichita Falls, Texas.

Leads Refiners



—Photo by Blank and Stoller

R. C. Homes

President, The Texas Company, New York, will preside at the first mid-year meeting of the American Petroleum Institute's Division of Refining at St. Louis, Missouri, April 15 and 16, 1931, as chairman of the Division of Refining General Committee. Mr. Holmes is also a director of the Institute and its vice-president for refining.

Ralph O. Dietler, assistant to the president of Midwest Refining Company in Denver, is being transferred to Stanolind Crude Oil Purchasing Company in Tulsa, as vice-president. He will take the place left vacant by the resignation of Eugene B. Marlow, who is now with Sinclair Oil & Gas Company.

William M. Barret, Incorporated, consulting geophysicists, Givens-Lane Building, Shreveport, Louisiana, and Curtis Building, Longview, Texas, has announced enlargement of facilities and personnel.

B. M. Givens, superintendent production for Sun Oil Company in the Mirando district, Southwest Texas, has been transferred to East Teaxs as result of the company having launched an active drilling program in the Kilgore and Joiner fields.

Walker S. Clute, identified with the oil and gas industry since 1915 in California, Rocky Mountain region and South America, has assumed the duties of district engineer for the Tulsa district of the United States Geological Survey with offices in the Wright building. This district is a branch of the Mid-Continent division of the Geological Survey with headquarters at Muskogee, Oklahoma, with John M. Alden, supervisor, oil and gas operations.

J. O. Mayfield and W. D. Mercer, Jr., of the D. & M. Machine Works, have returned to the company's headquarters in Houston after attending the oil show at Los Angeles.

Eugene B. Marlow has joined Sinclair Oil & Gas Company in Tulsa and will have charge of crude oil purchasing. Until April 1, he was vice-president of Stanolind Crude Oil Purchasing Company, a position he held when that organization was Sinclair Crude Oil Purchasing Company.

Mr. Marlow is now back with the concern he first joined in 1920 as a scout in the Tulsa territory. Later he was in the Ardmore and Mexia territories as a scout. In 1923, he was transferred to Sinclair Crude Oil Purchasing Company, as vice-president. When this concern came under full ownership of Standard Oil Company (Indiana) last year, he remained in that capacity.

Dr. J. T. Lonsdale, head of the geological department at Texas A. & M. College, was the principal speaker at the meeting of the San Antonio Geological Society in the Petroleum Club in San Antonio, Texas, March 6. His subject covered the problems of underground water supply in Southwest Texas and the chemical characteristics of that water. Dr. Lonsdale has been working with the United States Geological Survey in its investigations of the water supply in this section of Texas during the past week.

Dan C. Steele, Sr. of Houston, Texas, superintendent for Venezuela Gulf Oil Company, died at Cabimas, Venezuela, Sunday, March 29, of apoplexy. Mr. Steele had been in the employ of Venezuela Gulf Oil Company from March, 1929, to date and, prior to that, had been with Mexican Gulf Oil Company in Mexico from August 17, 1917. While with the Mexican Gulf Company, he served as warehouseman, field office manager and material foreman. Prior to his connection with the Mexican Gulf Company, Mr. Steele was superintendent with El Aguila in Mexico in 1912 and 1913, and later with the Penn-Mex Company in Mexico.

News From California Fields

BRAD MILLS, *Staff Representative, Los Angeles, California*

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Standard of California Has Eight Tests on North Dome

Coalinga, Calif.—Standard Oil Company of California now has eight active drilling tests under way at Kettleman Hills, all but one of which are on the North Dome. The company's policy has been to offset only where necessary, but the increase in activity has gradually led to the present drilling program. One well, No. 23V-6, is being drilled on the Middle Dome, being an offset to Petroleum Securities Company's Burbank 1. All of the seven North Dome tests are drilling below 6000 feet, and three are drilling below 7000 feet. The deepest active test is No. 7Q-Fee 21, which is drilling in hard shale at 7750 feet. All of the wells, with the possible exception of the Middle Dome test, should be completed within the next few months.

Superior Oil Company is making good time in Huffman 2, the second well to be drilled on the North Dome, having successfully landed a string of 9⅝-inch casing at 6990 feet. This well is now drilling at 7100 feet but will not be completed above 8000 feet. Huffman 1 was completed at 8323 feet and Huffman 2 may be drilled to an even greater depth.

Petroleum Securities Company's Felix is still producing above 5200 barrels of clean oil from 8100 feet. A string of 8⅝-inch casing has been cemented at 6860 feet in Felix 3, the third well to be drilled on the lease. Felix 1, which was a small producer in the top of the Temblor zone, is being deepened at 7450 feet and probably will not be stopped short of 8000 feet.

The greatest activity is either on or near the fee land and most of the new production will come from spots near the Felix and Huffman groups.

Association Has Taken Over 11,000 Acres on North Dome

Los Angeles.—The Kettleman North Dome Association has taken over nearly 11,000 acres on the North Dome at Kettleman Hills, together with all improvements, inaugurating perhaps the largest program of unit operation ever attempted. Under the terms of the plan, 15 companies, some of them conditionally, will turn over their holdings and become members of the association, to participate in the expenses and profits in direct proportion to the extent of their original holdings.

The plan of operation for the association involves a huge amount of work. A permanent camp will be built to care for employees, and work will be carried on as if a very large company were developing nearly one-half of the entire North Dome. Tanks, pipe lines and other projects will be completed where facilities are inadequate.

The association will complete six or eight wells within a few months and will keep about six strings of tools running until a daily production of 50,000 barrels is developed. Two of the producing wells on the North Dome are on the association's property, these producers including Milham Exploration Company's Elliott 1, the discovery well, and Continental Oil Company's Elliott 12-8. The gas-oil ratio of these wells is very unsatisfactory and they probably will be deepened to produce from more oil sand.

Standard Oil Company offsets the association on every section, but will co-operate in the development of its leases. This company is principally concerned with offsetting companies not in the association. Under an old purchase, the company obtained every other section from one end of the field to another, this checker-boarded arrangement proving a very valuable investment. Standard Oil Company is not a party to the agreement, but has agreed to develop its vast holdings exactly as if it had become a member,—or at least to hold production within market requirements and to cooperate in every way possible. The company will develop a production which will roughly equal that of the association.

Some of the acreage is conditionally included, but these operators will observe the rules and regulations of the unit plan. The acreage is divided as follows:

	Acres
General Petroleum Corporation	2,500
Milham Exploration Company	1,980
Continental Oil Company	1,980
Pacific Western-Kettleman Oil	1,440
George F. Getty, Inc.	800
Shell Oil Company	520
Belmont Investment Company	340
Associated Oil Company	240
Petroleum Securities Company	200
Standard Oil Company	200
Pioneer-Kettleman	200
Lincoln Drilling Company	160
L. G. Helm and S. L. Gillan	120
Amerada Corporation	100
Associated Oil Company-Pioneer Kettleman	20
Total	10,800

Los Angeles.—Although Santa Fe Springs remains one of the quietest fields in the state, there is reason to believe that further development of the Nordstrom and O'Connell zones in some parts of the field might prove profitable under more favorable conditions within the industry. The Nordstrom zone is found between 5000 and 5400 feet and underlies a smaller area than either the Buckbee, O'Connell or Clarke (Hathaway) zone, any one of which is also deeper than the sand in question. Wells completed in the Nordstrom zone have shown a more consistent decline than those in any sand below the Meyer.

Union Oil Company recently tested Bell 40, a well completed nearly two years ago, and established a new potential of 3000 barrels. Under normal conditions, it might be possible to complete additional wells in the Meyer, Nordstrom and O'Connell zones, especially where a company needed a sustained production.

The townlot section of the field is about spent in all zones, but the larger leases are still good for a steady yield. The Clarke zone seems too deep and inconsistent for further development.

Active Tests Reduced to 17 in Playa del Rey Area

Los Angeles.—The shutting down of several wells during the week reduced the number of active tests at Playa del Rey to 19. A survey of the idle wells shows a large percentage which have passed the shallow zone but which have fallen short of the deep zone. This inactivity would indicate either a shortage of money or a fear that the deep zone will not prove a profitable formation for completion.

There is only the remotest possibility of increased activity in the townlot section, but the larger operators will continue to develop their holdings. Even the conservative drilling of the larger leases may not support the present number of drilling wells, however. Any increase in activity in the townlot district probably would come from deepening operations, rather than from new tests, since the bulk of the lots have been drilled from the surface to at least some depth.

Early estimates as to the probable recoverable oil per acre undoubtedly were high. Some of the appraisers were unfortunately influenced by factors other than those founded upon good geological ethics, and their reports influenced investors to a great extent. Even the townlot district could have been developed profitably, but one well to each small lot was too much for a low pressure zone.

The deep zone will be more conservatively developed and may ultimately return a profit for a few operators holding large leases.

Independent Producers Sales Agency Formed in California

Los Angeles.—Independent Producers Sales Agency, the new organization which will be formed to handle as much of the independent's crude as possible, will not be a cure-all for the present depression, but tentative officials of the association believe that full cooperation of the members will go a long way toward securing a fair price for more than 40 per cent of the state production. Although details of the organization's operative plan have not been worked out, members will participate in the benefits in the proportion their production bears to the total. The agency is an organization wholly within the industry to insure a fair price for crude produced by the independent, but no effort will be made to increase production. On the other hand, a production of 500,000 barrels or less is urged. W. C. McDuffie has been mentioned for manager of the agency. Ralph B. Lloyd, royalty owner and independent operator is one of the organizers.

Chances of California's Deep Tests Considered Very Remote

Los Angeles.—Pending a production test in one of the two wells which have been drilled to a point below 7000 feet, operators at Huntington Beach are generally not planning a deepening campaign.

Opinions are mixed as to the value of the discovery in either of the two deep wells, with the smaller operator more inclined to become excited over the possibilities than the major operators. Several locations have been made and it is known that at least three operators are anxious to participate in deep drilling, but the absence of any definite assurance that a productive zone has been found is acting as a throttle on enthusiastic programs. Superior Oil Company's Fee 1, the original deep test is shut down at a reported depth of 7490 feet. The company has not announced when it will drill out the cement for a production test.

Meanwhile, two more wells are being deepened by the company and this action leaves the impression that the first deep well cored good oil sand and that the chief desire is to rush two more wells down to participate in the first production. W. E. McCaslin has reached a depth of 7600 feet in Transport 1 and certainly should not have to drill much deeper to test most of the zone cored in the original deep test.

A few of the locations being made probably will not become deep tests unless the first production tests are favorable. The major companies are frowning on additional drilling, but they will join in the race if a good well is completed below 7000 feet.

Idle Wells at Long Beach Largest in Past Two Years

Long Beach, Calif.—The percentage of idle wells at Long Beach is larger than at any time during the yast two years, although the total number of idle tests may be smaller than at various times during the period. Just prior to the series of crude price reductions, many wells were started with the view of participating in the good production obtained in various sections of the field.

Limited market for crude may be given as the cause for many suspensions, while in other cases the idle operator insists that he does not want to bring more crude on to an overburdened market.

The Los Cerritos and southeast extensions and development of a good production around 5200 feet stimulated activity and promised to maintain an even tide of development; but economic conditions have succeeded in overbalancing the desire to drill more wells. Several operators who could well afford to complete their wells and risk a market for production have suspended operations for the present. On the other hand, the small operator who runs on a very narrow margin is also represented in the total of idle drilling wells.

The present dull period will reduce the field potential and will make future development more desirable when a better demand for crude arrives.

Deepening Campaign Unlikely In Huntington Beach Field

Los Angeles.—The chances of obtaining commercial production in any of California's very deep wildcat tests are very remote, the chief significance thus far seeming to lie in the fact that wells may be drilled much deeper than the operator of a few years ago suspected.

Shell Oil Company's Williams 1, the world record Semitropic test which was drilled to 9702 feet, is showing some gas but mechanical trouble has developed and it is doubtful whether the bottom few hundred feet is open. A string of 2½-inch tubing was hung at 8900 feet and swabbing continued. The hole has been cleaned out to 8910 feet, with a fish frozen at 9025 feet. This is a very interesting test, but the outcome of present efforts to obtain commercial is very doubtful.

Chanslor-Canfield Midway Oil Company is coring at 9100 feet in Hobson A2, a wildcat test about two miles east of the Rincon field and in line with the Ventura Avenue field, with the formation running to shale and streaks of oil sand. This is the first ever drilled to 9000 feet in Ventura County and is a very important test from a geological standpoint. Oil sand was found around 7400 feet and the well flowed on the compressor during a production test.

Oklahoma--Kansas Field Notes

FLOYD SWINDELL, *Staff Representative, Tulsa, Oklahoma*

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Potential Taking Boosts Oklahoma City Production

Oklahoma City.—Production in the Oklahoma City pool soared to a new all-time high when 92 wells produced 234,896 barrels the first 24-hour period in April. This sharp increase came about through the taking of potentials which was commenced on April 1. Under a new ruling of the corporation commission no well will be allowed to produce during any proration period until its potential has been established for that period. The umpire expects to complete the gauge of the field at the rate of 60 to 90 wells per day, requiring about 15 days to establish the total potential.

Phillips Petroleum Company had the largest of the five wells that were completed during the week when Othenin 1, SW NE NE Section 3-11n-3w, came in for an initial gauge of 7591 barrels. After flowing three hours and 40 minutes of its four-hour gauge the well started cutting out connections and had to be shut in. Production is coming from Wilcox sand at 6277 to 6441 feet with total depth five feet below the base of the sand. Approximately three-quarters of a mile to the southwest, Anderson-Prichard and Hall and Briscoe had the Wilcox from 6296 to 6388 feet from which the well gauged 4618 barrels in four hours. Total depth is 6403 feet. The Sinclair-Texas Pipe Line Company is connecting to both wells. Phillips Petroleum Company's McBath 1, NW SW SE Section 10-11n-3w, cut out connections after flowing 4200 barrels in one hour and 25 minutes. The well was brought in through a four-inch choke flowing under a 475-pound back pressure. Westgate Oil Company's Wilson 1, NE SW NW Section 10-11n-3w, on the extreme west edge of the pool, gauged 5082 barrels in four hours from Wilcox sand topped at 6400 feet and penetrated to a total depth of 6550 feet still in sand. Eason Oil Company's (formerly Oklahoma City Petroleum Company's) Lively 1, NE NW SE Section 15-11n-3w, gauged 6872 barrels in 4½ hours when tested last week. The last gauge prior to this was taken on March 20, when it produced only 1124 barrels in four hours and bridged several hundred feet from bottom.

McPherson County Area Continues Kansas Lead

Wichita, Kansas.—No further progress has been made on Stratman et al's Aylward 1, CSE NW SE Section 1-17s-10w and Cress et al's Sharp 1, SE NE Section 13-20s-10w, both of which were expected to be completed as discovery wells by the end of the past week. The former is still shut down with a hole full of oil from "Siliceous lime" at 3250 to 3255 feet, awaiting the erection of tankage while the latter is shut down with a hole full of oil from "Siliceous lime" at 3330 to 3336 feet. No flurry of activity is expected in the event that both prove productive. Several wells of the same class are now shut in in various counties in the central part of the state awaiting more favorable market conditions.

The Ritz-Garrett-Decker area in McPherson County continues to lead the state, being in fact the only activity of note. Derby Oil Company and Empire Oil & Refining Company completed Domsch 1, CNE NW Section 6-20s-1w, on the northeast edge of the Ritz pool, flowing at an estimated 1850 barrels from the Viola lime horizon at 3408 to 3418 feet. Olson Drilling Company and Shell Petroleum Corporation deepened Johnson 1, SE NW SE Section 36-19s-2w, seven feet into Viola lime making total depth 3404 feet. Before deepening it had swabbed 690 barrels in eight hours with the Viola barely touched. Operators believe that production was increased by deepening but have been unable to get a further test because of the necessity of changing to a heavier motor with which to pull the swab. Results of this test will be of special interest because of the extension that it will give to the deep zone. All offset and nearby wells are producing from chat. Miller and Shell Petroleum Corporation plugged back from 3474 to 3465 feet in Blair 1, NW NW NW Section 32-19s-2w. Within a half hour after the formation between 3445 and 3455 feet had been shot with 40 quarts, 500 feet of oil was standing in the hole and in three hours the column had risen to 2750 feet. It was being cleaned out at last report. Dickey Oil Company's Williams 1, NE NW Section 26-19s-2w, had the chat high at 2895 to 2948 feet and is estimated at 500 barrels of oil and 2,500,000 cubic feet of gas. Carey and The Texas Company announced location for Holt 1, CNW SE Section 13-19s-2w, in the Decker area.

Eisenhour et al's Hoard 1, in the Eastborough Estates in Section 19-27s-2e, in the northeastern portion of the Eastborough pool in Sedgwick County, made 175 barrels on the pump from chat topped at 2900 feet. It was the only recent completion in the pool.

Two Completed, Two Started In Tatums Pool During Week

Ardmore, Oklahoma.—Two nice wells were completed, one new start was made, and two locations staked in the Tatums pool during the past week. Amos Drilling Company's Hooks 2, SW SE SE Section 13-1s-3w, on the northeast edge of the pool, flowed 1450 barrels during the first 24 hours and is now shut in for proration. The well cleaned itself and started flowing after being bailed down only 800 feet. It had been shut in awaiting more favorable weather conditions. Production is coming from broken sands at 2005 to 2108 feet and solid sand from the latter depth to 2199 feet. Completion of this well forces offsets on the north and on the east, both of which are owned by the same operator on the Sparks-Hooks lease. First of the offsets to be drilled will be Sparks-Hooks 1, SE SE SE Section 13-1s-3w, the east offset which was staked Sunday. According to present plans the other will not be commenced until this test has been completed. The Texas Company started taking initial 24-hour gauge Saturday morning at Eaves 6, NE SW SW Section 24-1s-3w, on the south edge of the pool. It produced 125 barrels swabbing the day be-

fore but had to be shut down because of mechanical difficulties. Production is coming from sand topped at 2372 feet and penetrated to 2481 feet. Louis Sykes started drilling in Hopson 1, NE NW NE Section 25-1s-3w, on the south side of the extension. It is a diagonal southeast offset to Trevelyn Oil Company's Mitchell 4, which was completed for 715 barrels last February but is also equal distance between Carter Oil Company's Hopson 1, NE NE NE Section 25-1s-3w, and Westheimer & Daube's Cox 1, NE NE NW Section 25-1s-3w, both of which were dry and abandoned after being drilled below 2500 feet. Lesh and McCall have staked location for their Carter 2, NE SW SW Section 14-1s-3w, on the northeast side of the pool. It is a south offset to their Rufus Hooks 1, which was completed several months ago for 317 barrels in sands between 2485 and 2557 feet. Carter Oil Company's Paul Robb 1, NW SW NW Section 19-1s-2w, new producer on the east edge of the pool, completed its initial test when it swabbed 260 barrels of oil in four hours making a total of 1500 barrels for the 24-hour period. It is now shut in for proration. Magnolia Petroleum Company is drilling below 3800 feet in D. C. Burton 1, NW SE NW Section 30-1s-2w, one quarter mile southeast of production.

Northeast of Graham

Don Phillips Oil & Gas Company has completed rigging up rotary tools and is ready to start drilling in Lyle 1, NE SE SW NE Section 28-2s-2w, 1½ miles northeast of the old Graham pool in western Carter County.

Crane and Rankin are shut down temporarily at 3255 feet in their Adkins 1, NE NE SE Section 14-1n-9w, just north of the Oil City pool in the Duncan District. George Pace's Bush 7, NW NE SE NW Section 3-2s-8w, on the south side of the old Empire field, is shut down at 1637 feet. It is good for a small producer from sands at 1593 to 1637 feet.

Northeast of Marietta

Batson & Starritt are moving in tools to clean out and put on the pump, Dillard 1, CSE NE NW Section 25-6s-2e, an old test abandoned several years ago by the Schermerhorn-Ardmore Company. The present operators have spent considerable time cleaning out to the sand at 1586 to 1596 feet and now have the well in shape to make a small producer. Batson, Starritt and Autry are drilling below 220 feet in Autry 1, NW NW NW Section 26-6s-2e, Love County wildcat about seven miles northeast of Marietta. It is 660 feet north and approximately 1½ miles west of the Batson & Starritt, Dillard well, and about seven miles southeast of production in the Brock pool in Carter County. Surface beds in this area are lower Cretaceous in age, the basal bed of which is Trinity sand which ranges from the surface to more than 200 feet below the surface. Little is known as to the attitude of Paleozoic rocks which underlie the Trinity other than the fact that one is unconformable to the other.

Tulsa.—Five wells are drilling in the West Chandler area, interest having been revived by the completion of T. B. Slick Estate's Althoff 1, Section 7-14n-4e. Two wells are drilling at interesting depths and should be in the pay zone within a week or 10 days. Coline Oil Company's Telford 2, SW NW SE Section 7-14n-4e, had top of the Mayes at 4600 feet and was drilling at 4620 feet at last report. T. B. Slick Estate et al had the Woodford at 4700 feet and Hunton at 4740 feet in Ketzelman 2, SE SE SW of the same section. When last reported it was drilling below 4810 feet.

Wanette Producer Would Force Seven Offset Tests

Tulsa. — J. A. Hull's Swan 2, NW SE SE Section 22-6n-3e, on the southwest edge of the Wanette pool, found a mixed section of sand, broken sand, and sandy lime all of which was showing oil between 3529 and 3547 feet. At this depth it went into shale and stopped at 3557 feet. Payne Drilling Company's Bullock 6, NE SW NE Section 22-6n-3e, on the discovery lease, cored a show of oil and gas in sand at 3589 to 3590 feet after setting 6⅝-inch casing at 3586 feet. Bullock 5, south offset to Bullock 6, was a fair well and the showing made by No. 6 may determine whether or not the west offsets to the two wells will be drilled. In the event that Payne Drilling Company should drill and find commercial production in the southwest corner of its lease, seven offsets might be forced, Gypsy Oil Company having one in the SE SE NW; Deep Rock Oil Corporation, two in the NE SW; Continental Oil Company, one in the NE SE SW; J. A. Hull, one in the NW SW SE; and Twin State Oil Company, two in the NW SE, all in Section 22-6n-3e. Geological data now available indicates that wells as far west of the middle of Section 22-6n-3e, would be at or near the oil-water contact as defined on the north end of the pool.

Wewoka Townsite Well Makes Three Flows; Cleaning Out

Tulsa. — Burke-Greis Oil Company had top of Cromwell at 3180 feet and set 5 3/16-inch casing at 3182 feet in Henshaw 1, NW NE SW Section 30-8n-8e, on the southwest edge of the Wewoka Townsite pool. When last reported it was being cleaned out at 3252 feet and had made three small flows of oil from the sand at 3180 to 3239 feet. Same company's Henshaw 3, twin to No. 1, had a hole full of water from the Wilcox at 4116 to 4132 feet and will probably be abandoned. Mid-Kansas Oil & Gas Company and Ramsey Petroleum Company's Davis 5, NW SE NW Section 30-8n-8e, twin to No. 4, flowed 285 barrels in 18 hours after drilling the plug to 3093 feet and bailing. Operators are rigging up standard tools to drill deeper. Mid-Continent Petroleum Corporation was coring ahead in shale at 3162 feet after having a small showing of oil at 3080 to 3088 feet in Tommie 1, SE NE NE Section 25-8n-7e, directly west of the Townsite pool.

Carter Oil Company has 2500 feet of oil in the hole in Rogers 5, NW NW SE Section 2-8n-5e, in the northern portion of the Carr City pool. Wilcox was topped at 4193 and penetrated to a total depth of 4205 feet. It will probably be drilled deeper and put on gas lift. Prairie Oil & Gas Company is tubing for gas lift in Hyde 5, CSE SE NW Section 2-8n-5e, northwest offset to Carter Oil Company's Rogers 5. It swabbed 245 barrels in 12 hours after being shot with 25 quarts on bottom. Production is coming from Wilcox sand at 4176 to 4193 feet. Gypsy Oil Company's L. Coker 1, SW SW NE Section 2-8n-5e, east offset to the Hyde well, is bottomed at 4231 feet in Wilcox. It will be drilled deeper and shot. Prairie Oil & Gas Company's Hyde 4, NE SW NW Section 2-8n-5e, swabbed 40 barrels while 14 feet in the Simpson formation at 4149 feet.

Magnolia Petroleum Company has staked location and is building derrick for Estes 2, SE SW NE Section 10-5n-9w, in the Cement District in Caddo County. Mid-Kansas Oil & Gas Company and Ramsey Petroleum Company are drilling below 5564 feet in Preston-Culp 6, NW NW NE Section 6-5n-9w in the western part of the field.

North and West Texas Field Notes

H. H. KING, *Staff Representative, Fort Worth, Texas*

Big Lake Workover Well Good for 11,710 Barrels

San Angelo, Texas. — Greater production honors were added during the past week by the record depth oil and gas producing horizon in the Big Lake field when a workover well produced 173,000,000 cubic feet of wet gas and 11,710 barrels of oil, testing 60 degrees gravity at 48 degrees temperature, during the 24-hour period ending 7 a.m. April 6 from a depth of 8667 feet. This unusually prolific well was scored by Group One Oil Corporation's (Continental Oil Company) University 2-B, and the flow of oil has increased daily since the hole was unloaded on the afternoon of April 2, with an initial flow of 460 barrels oil hourly. Production of this well alone is in excess of the contracted crude market outlet held by its owners, who have notified the Texas Railroad Commission of intentions to kill the flow and shut the well in for an indefinite period in order to cooperate with the latter's state-wide proration orders.

Field staff of Group One Oil Corporation, under supervision of John C. Nicklos, assistant general superintendent, succeeded in killing the well on the evening of April 6, using about 300 barrels of 16-pound admixture. The crew began killing the well at 6 p.m. and had it completely mudded off 45 minutes later, although only 22 minutes were actually consumed in pumping in the fluid.

Since adherence to proration would permit only a comparatively small oil output daily from University 2-B, officials of Group One Oil Corporation consider it a dangerous proposition to try operating the well against an excessive back pressure.

University 4-B is a striking example of the hazard offered by these deep wells when application of back pressure is overworked. The latter broke through a joint of seven-inch casing in the upper section of the hole and snapped off the connections at the surface while flowing 5805 barrels oil and 42,730,000 cubic feet of gas when back pressure on the tubing was increased from 1900 to 2000 pounds on March 10. The well flowed wild for a brief period before connections could be replaced. This well advanced to a new peak of 9742 barrels oil at the start of the present week, with 450 pounds back pressure on casing and 350 pounds on tubing, and will soon have to be killed to install a smaller string of pipe, because of this steady rise in production, which is typical of most of the nine deep wells in the field.

Group One Oil Corporation's University 2-B was killed December 7 in order to case off 2575 feet of open hole; deepen from 8489 feet; and also to comply with the commission's order for the installation of tubing. The well had yielded 389,609 barrels high gravity oil up until the time it was killed, and was averaging about 2100 barrels oil and 25,000,000 cubic feet gas daily. The rotary drill stem twisted off six joints below the seat of the 9⅝-inch casing at 5914 feet after using more than 10,000 sacks of baroid and mud in killing the flow. The crew were unsuccessful in fishing for the lost stem, and sidetracked, with seven-inch casing later cemented in re-drilled hole at 8086 feet, using 750 sacks cement.

Big Lake Oil Company's University 1-C scored a loss in production when deepened recently from 8668 to 8729 feet preparatory to installation of tubing in accordance with the commission's orders, and is now flowing 894 barrels of oil and 1,369,000 cubic feet of gas, with 520 pounds back pressure on the casing. The flow of this well declined about 50 per cent after deepening. The gravity of the oil decreased from 50 to 44 degrees at 54° temperature.

The nine deep wells in the Big Lake field started the current week off with an oil yield of 33,248 barrels and 308,108,000 cubic feet of gas daily. Big Lake Oil Company was credited with 7559 barrels of oil, and Group One Oil Corporation 25,689 barrels.

Production from the nine deep wells in the Big Lake field for the 24-hour period ending 7 a.m. April 6, 1931, is listed below:

	Oil Production	Gas Production	Pounds Casing Back Pressure	Pounds Tubing Back Pressure	Total Depth
Big Lake Oil Company—					
University 1-C	894	1,369,000	520	....	8,729
University 2-C	1,439	14,982,000	425	1,775	8,603
University 3-C	170	1,351,000	600	....	8,923
University 4-C	2,979	11,466,000	1,500	800	8,697
University 5-C	2,077	24,011,000	1,150	500	8,718
Group One Oil Corporation—					
University 1-B	2,870	15,373,000	215	....	8,523
University 2-B	11,710	173,000,000	750	....	8,667
University 3-B	1,367	18,498,000	450	1,150	8,633
University 4-B	9,742	48,058,000	450	350	8,587

Wichita Falls, Texas.—Deep Oil Development Company's L. F. Wilson 1, which established the first deep lime production in west central Archer County March 22, earned a potential production of 470 barrels oil when given official gauge last week. This well is located in the southwest corner of Section 76, A. T. N. C. L. Survey, and is producing from Canyon lime at 2208-14 feet. The oil tests 42.6 gravity corrected. The well flows natural by heads, but some swabbing took place while the above gauge was in progress. More than a dozen tests are being started to this new deep horizon for the county, including a number of old wells that are being deepened.

San Angelo, Texas.—A flow of 10 million cubic feet of sulphur gas was encountered in lime at 4045 to 4050 feet in the second test drilled on the Cowden ranch discovery block of Southern Crude Oil Purchasing Company in northern Ector County April 7. This gas flow was unexpected, as the company's wildcat producer, which is flowing 40 barrels of sulphur oil daily through 3/16-inch choke, had only a small flow of sweet gas before entering oil saturated lime at 4154 to 4244 feet. Cowden 2 is at the center of the northeast of northeast of Section 34, Block 43, Township 1 north, and will be deepened to the expected oil level.

Southern Crude Oil Purchasing Company opened this pool early last September, and a large tank was erected to store the production.

East Central Texas Field Notes

H. H. KING, ***Staff Representative, Fort Worth, Texas***

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East Texas Production Rises To New 144.690-Barrel Peak

Tyler, Texas.—Advancing to a new peak flow of 144,690 barrels daily during the week ending April 1, East Texas is destined to reach beyond the 200,000-barrel level before proration restrictions, which have been ordered enforced beginning April 10, can be applied. A gain of 22,575 barrels was registered this past week over the daily average output for the week previous, while number of wells on production jumped from 87 to 126, with by far the majority of the producers pinched.

The Joiner and Kilgore fields contributed 119,500 barrels of the daily production credited to the district during the past week, while the Longview field acounted for a daily average of 24,990 barrels from 11 wells. The latter is scheduled to register a healthy increase next week by reason of the number of tank car racks in operation being increased from two to five. No rail congestion is experienced by Longview field shippers, except in connection with oil moving to Gulf Coast over the Missouri Pacific lines. The I. & G. N. Railroad, a member of the latter system, receives Gulf Coast oil movement originating on the Texas Pacific Railroad, and is loaded near capacity with outbound shipments originating in the Kilgore and Joiner fields.

A week-end check on the production of the various wells and leases in the Kilgore field reveals an actual crude yield of 87,360 barrels daily from 37 flowing wells on restricted basis, while on the same data there were six additional wells shut in for lack of a pipe line connection. The Kilgore field has 20 tests on top of the Woodbine sand horizon, and all should be completed as producers within 10 days. This mid-field is proving to be the most prolific of the three areas, and is favored with much greater sand thickness.

Production in the Longview field at the close of last week was throttled to 21,510 barrels daily from 10 wells flowing via small chokes, with three recently completed wells shut in for pipe line connection. Arkansas Fuel Oil Company was credited with 9250 barrels of this production, while the joint lease of the latter and Yount-Lee Oil Company was producing 6300 barrels daily, making a total of 15,550 barrels daily moving out over Arkansas' rack.

Houston Oil Company in association with Ed. M. Jones and H. R. Smith has taken the lead away from Humble Oil & Refining Company in being the largest producer and shipper of crude from the district. The former group produced and shipped over the tank car racks of Houston Oil Company 31,550 barrels daily late last week, while Humble Oil & Refining Company has held consistently at about 24,000 barrels daily for several weeks. It can be readily seen that these two shippers are producing and handling about one-third of the crude being produced in the three areas. Both have racks on the main line of the I. & G. N. Railroad, while most of the shippers in the Joiner field have their racks on the Henderson branch line of the latter railroad.

An increase in production from Humble Oil & Refining Company's 13 completed wells in the Kilgore field is in prospect early this week, as Humble Pipe Line Company is proceeding with the completion of its eight-inch extension line into the field. This line was within a few days of being completed middle February when owner suspended work to await proration. When the railroad commission signified its intentions of ordering production curbed in the district work was resumed. Kilgore field crude moving through this line will be delivered to the Baton Rouge refinery of Standard Oil Company of Louisiana, an affiliated concern.

Eventual Linking of Kilgore And Longview Fields Likely

Longview, Texas. — Eventual linking together of the Longview and Kilgore fields was emphasized during the past week when Harry W. Elliott et al's S. G. Andrews 1, located in the southwest corner of the northwest 50-acres of the 193-acre farm, Wm. F. Hyde Survey, Gregg County, registered unusual gas pressure with an initial flow of 375 barrels oil during first 50 minutes. This flow was taken through choke, and from sand at 3636-50 feet. It is located several miles northwest of Kilgore townsite, and on a direct line between the Kilgore and the Longview fields. Production was restricted to 1455 barrels during first 16¼ hours, then virtually shut in for storage. A number of tests are getting under way in all directions from this connecting link.

Efforts of Alco Oil Company's Castleberry 1 to make an east extension to the trend of production between the Kilgore and Longview fields appeared doubtful early this week after having passed through broken oil sand and shale formation at 3444-47 and 3450-52 feet, then logged Del Rio lime at 3472-95 feet. A drill stem test of the formation failed to yield production; the owners then decided to drill to the Georgetown. This outpost test is southwest of Willow Springs and near the Sabine River.

Tidal Oil Company's Lathrop 1 was scheduled to be tested early this week after having made a successful flow on the third drill stem test, with the hole bottomed in Georgetown lime at 3634-56 feet. This test is located only a short distance east of production in the Longview field, and encountered thin layer of sand at 3603 feet. Tidal Oil Company-J. K. Wadley and Jim P. Evans' Castleberry 1, located to the northeast of the above test, was nearing a decisive depth early this week, with little prospects of making a producer through having encountered first Austin chalk at 3545 feet. The surface elevation is 416 feet, and the log showed broken chalk and shale while drilling below 3580 feet. Tidal Oil Company and Wm. Kistler have contracted for mineral rights to the Lake Davernia Hunting & Fishing Club, consisting of 262 acres solid, with about 100 acres under water. This tract is located in western Gregg County and north of the Texas Pacific Railroad. Plans are to drain the land when development work gets under way.

An important extension to the northwest for the Longview field was to be tested early this week after having

cored sand at 3533-64 feet. This prospective producer was drilled by the Sultan Oil Company, Tulsa, on the southeast corner of the S. F. Thrasher 40-acre lease, G. W. Hooper Survey. Across the county line in southeastern Upshur County, Tips DeArmand-W. S. Capps et al's Chas. Cobb 1 has abandoned at 3864 feet after yielding salt water with trace of oil and gas in Woodbine sand at 3777-3842 feet. This failure is believed to be near the northwest edge of the productive limits of the Longview field, and definitely establishes a water level to guide operators in the future in penetrating the Woodbine. Successful completions in the new East Texas area have escaped water troubles in any form to date, even though a number of wells have drilled through the Woodbine into Georgetown. However, maximum penetration has not been tried on the west side of the producing area, and water is to enter from this direction when sufficient oil drainage has occurred.

East Texas Field Activity Registers Another Increase

Tyler, Texas.—Another gain in field activity was registered by the three East Texas fields during the past week, but the completion of more than 50 wells during the same period caused the increase to be only four, with a loss of nine operations in Rusk County. The latter county was credited with 290 operations at the start of the current week, while Gregg County increased from 86 to 99 operations. The two counties now have 231 active rotary rigs at work, and derricks and rigs account for 134 operations on the comeup list.

Threatened proration enforcement throughout the district has not appreciably influenced operators in carrying on their development programs, as some delay is expected to occur in applying the commission's order, while it is quite evident that court action will be taken by a number of operators against the order.

East Texas Getting More Than 2,000,000 Barrels of Tankage

Tyler, Texas.—In excess of 2,000,000 barrels of steel tankage, involving 55's, 64's and 80's, has been erected or authorized for East Texas. Construction of many times the above storage capacity was in prospect about the time the question of proration of the district presented itself on the horizon, thus causing many operators and pipe line concerns to postpone their proposed large tank purchases. Considerable tank work is expected to take place in the district, even though proration has been ordered enforced by the Texas Railroad Commission, but such installations will largely be confined to working tanks.

Republic Production Company is clearing ground for the erection of two new 80,000-barrel steel tanks adjacent to its 50-car rack on the north end of the C. E. Christian 110-acre farm, Robt. W. Smith Survey, Kilgore field. Petroleum Iron Works will erect the tanks. Magnolia Pipe Line Company is cutting down two 55's in the Corsicana district to be set up on its Norris tank farm and station site, Gregg County, where two 80's have just been completed by the Chicago Bridge & Iron Works. Kirk-Morrow Iron Works received the contract for the moving of the two smaller tanks. Shell Petroleum Corporation is moving a 55,000-barrel steel tank from Oklahoma to be erected in the Kilgore field.

Cranfill-Reynolds Company has contracted for the dismantling of five 55,000-barrel steel tanks which have been standing idle in Winkler County, West Texas, in order to utilize them in connection with its drilling operations in the Rusk-Gregg district, East Texas. They will be erected a short distance west of Longview between Texas & Pacific and International-Great Northern railroads on the Mrs. Elsie Calvin tract, Marshall Mann Survey. Arkansas Fuel Oil Company has arranged for removal of two 55's from warehouse stock in the Arkansas-Louisiana district to be erected a short distance north of Longview in the H. McNutt Survey.

First Harrison County Test Reaches the Woodbine Sand

Shreveport.—The first test drilled in Harrison County, Texas, since a drilling campaign was started there as a sequel to the development of the Rusk-Gregg field, that has reached the Woodbine sand, picked up five feet of this formation with a very light oil saturation, during the past week.

This test is Sinclair Oil & Gas Company's Davenport 1, J. V. Morton Survey, cored sand identified as Woodbine, from 3693 to 3698 feet, elevation being 396 feet. The well continued on to 3728 feet, going into the Georgetown shale and lime with 14 feet of the former and 16 feet of the latter. This test topped Pecan Gap at 2420 feet and reached base of that formation at 2960 feet. Austin chalk did not appear but sandy shale was reported to 3670 feet, then broken lime and shale to 3690 feet and three feet of limey chalk.

Due to packer failure to hold, a drill stem test was missed in the test Saturday night, April 4, and a larger packer was ordered. Another test was to be tried Tuesday, April 7. The test is on a 2000-acre block. This test is 12 miles north and east of Gregg County production. It is four miles northwest of the town of Harleton and is a mile northwest of Crump and Hannagan's Dunn 1, Bettie Humphries Survey, in which the Woodbine had been pinched out.

Banner and associates late last week spudded Lowry 1, W. O. Stanfield Survey and George L. Pace also started drilling Barker 1, Victor Pedraso Survey.

Maulding and associates also spudded Frost Lumber Industries 1, A. B. Fountain Survey, Shelby County. Shasta Oil Company shut down at 2250 feet in Johnson 1, William Mason Survey, Marion County, after coring sand at 2250 feet, which showed nothing. Sinclair Oil & Gas Company's D. R. Coulter 1, William Russell Survey, Marion County, is making rapid progress being at 2030 feet late last week.

Tyler, Texas.—Trunk line connection reported last week as having been started by Magnolia Pipe Line Company from the southwest edge of the Joiner field will be owned and operated by Tidal Refining Company upon completion. The latter has contracted for 10,000 to 15,000 barrels of daily crude movement from East Texas to the Gulf Coast through Magnolia Pipe Line Company's system on a common carrier basis, but will gather its own crude. Arrangements were made for Magnolia Pipe Line Company to install the Joiner field system, which will involve 22¾ miles of six-inch welded pipe, extending eastward to a point near the Rusk-Panola County line, where connection will be made with the latter's 10-inch trunk line, in order to expedite its completion. The right of way has been taken in the name of the Tidal Refining Company, Tulsa.

Field Operations in New East Texas Area

RUSK COUNTY OPERATIONS

Operator—	Locations	Derricks & Rigs	Active Tests	Total
Geo. S. Anderson & Cox			2	2
W. D. "Andy" Anderson et al			2	2
C. Andrade-Imperator Oil Corp.		1		1
Armstrong & Pitts		1		1
Babcock-Gordon Oil Co.	1		1	2
Nick Barbare (UOG&M Co.)	1		1	2
Ed. W. Bateman (now K&P Oil Co.)			1	1
Beard & Hammond		2		2
Bill & Dave Oil Corp.			1	1
Big Indian Oil & Dev. Co.		1	1	2
R. L. Blackstock et al			2	2
British-American Oil Co.		3	1	4
Dan Brooks, Trustee, et al			1	1
H. L. Brown-Hill (Navarro Oil Co.)		1	1	2
Burton Drlg. Co., (Sabine Synd.)		2	1	3
Carolyn Oil Corp.	1			1
Roy I. Carter (C. P. Oil Co.)	1	1	3	5
E. L. Chapman et al			1	1
Clark & Cowden			1	1
Cordova Union Oil Corp. et al		2	3	5
Crabtree-Rowe-Johnson			1	1
Cranfill-Reynolds Co.		1	4	5
J. G. Curtis & Lowe			1	1
Danciger Oil & Ref. Co.		3		3
Geo. DeMontrand-Geo. B. Ray	1			1
Devonian Oil Co.-Gulf Prod. Co.			1	1
Dohman et al			1	1
Wm. H. Dunning, Jr.			1	1
W. H. Dunning & J. H. Markham		1	2	3
East Texas Ref. Co.		2	1	3
Harry W. Elliott et al			2	2
Elzey Drlg. Co. & C. H. Tautenhahn		1		1
Geo. Fagg et al			1	1
Federated Oil Co.	2		3	5
Fitzsimmons & Thomason			1	1
Frank Foster-Deep Rock et al			3	3
Foster-Little et al			1	1
Fox-Butler & Heflin			1	1
Gibson-Johnson & Merrick Drlg. Co.			1	1
Gilcrease Oil Co.			2	2
R. W. Giles (Shreveport Prod. Co.)			1	1
A. M. Griffith et al			1	1
Gulf Production Co.		4	6	10
Gulf Prod. Co.-Devonian Oil Co.			1	1
W. B. Hamilton-Consolidated Oil Co.			5	5
L. P. "Pink" Hammond et al		1		1
Haynes Drilling Co.			1	1
Heep Oil Corp.			1	1
Heep Oil Corp. & Imperator Oil Corp.		1		1
Hicks Drilling Co.			1	1
Hill & Jack Younger		1		1
John W. Hoosier et al			1	1
Horseshoe Synd. (was W. B. Pierce)			1	1
Humble Oil & Ref. Co.	2	3	12	17
Houston Oil Co.		2	6	8
H. L. Hunt et al	1		1	2
H. L. Hunt & Grady H. Vaughn			2	2
A. R. Irwin et al			1	1
Johnson et al			1	1
C. M. Joiner (E. R. Tennant, Rec.)			2	2
Ed. M. Jones et al			2	2
Ed. M. Jones-Houston Oil Co.			4	4
Jones Drlg. Co.			1	1
K. & M. Oil Co.		2		2
Karona Oil Co., (Heard)		2	1	3
J. S. Kimbrough et al			1	1
LaSalle & Davenport		1		1
Killerman & Hines		1		1
Laster Oil Co.			1	1
Laster Oil Co. & Miller		1		1
Louisiana-Texas Oil Corp. & Lyons			1	1
Leonard Pet. Co.			1	1
Lewis Prod. Co.			1	1
Lewis Prod. Co. & Selby O&G Co.		2		2
Lide-Taylor Oil Co.		1	1	2
Lide-Rowe Oil Co.			1	1
Lively & Bryan			1	1
Pete Lively et al			1	1
Luling Oil & Gas Co.		1	1	2
John E. Mabee, Inc.				
E. B. Madden et al			1	1
Magnolia Pet. Co.	1	2	5	8
Marine Corp. et al	1		2	3
Chas. McDonald-Merrick Drlg. Co.			1	1
C. L. McMahon et al		2	1	3
McMann et al			1	1
McIntyre Drilling Co.			1	1
McMillan et al			1	1
Merrick Drlg. Co. et al			1	1
Mid-Kansas O&G Co.		2		2
Morefield Drlg. Co.-B. T. Head			1	1
H. S. Moss & Pete Urschell			2	2
Moss et al			1	1
Navarro Oil Co.		1		1
H. E. Oliver & F. H. Brown		1		1
Olson Bros. et al			3	3
John W. Olvey & Sample		1		1
Pearl Oil Co. (Vitek)		1	1	2
Peery-Woody & C. W. Boller		1	3	4
Petroleum Marketing Corp.			1	1
Phares & Sample		1		1
A. W. Phillips Oil Operators	1	1	1	3
Pilot Oil Co. (Tom E. Cranfill)		1	2	3
Pioneer Oil Co. (Moody-Seagraves)		3	5	8
Republic Prod. Co.-Louis Hart			1	1
Reserve Oil Co. (now E. M. Jones)		1		1
Robert Oil Corp. et al			1	1
Frank W. Roe		1		1
Robertson Drilling Co.			1	1
Roeser-Pendleton, Inc.		1		1
J. S. Rushing et al			1	1
Rusk County Oil Co.		1		1
Nat Sadler et al			1	1
Shasta Oil Co.			1	1
T. G. Shaw Interests		1		1
Bert J. Shaw Oil Co. et al			2	2
Shell Pet. Corp.			1	1
Shubert (East Texas Loan & Dev. Co.)			1	1
Sinclair O&G Co.			3	3
H. R. Smith-Gulf Prod. Co.			2	2
Snetcher & Pitman			1	1
Stanolind Oil & Gas Co.		1	3	4
H. R. Smith-Houston Oil Co.			2	2
Stokes et al		1		1
Snowden & McSweeney Co.			2	2
Southern Oil Co.			1	1
Sun Oil Co.		2	1	5
Texas Inland O&G Co. (G. W. Basom)			1	1
G. O. Thompson et al		1		1
Tidal Oil Co.		4	1	5
Turman Oil Co.		3	4	7
C. E. Upchurch & Allen		1	1	2
Wainwright-West Oils, Ltd. et al			1	1
W. D. Walton et al			1	1
Ward Oil Corp.		2	1	3
Ward Oil Corp.-Elliott-Johnson			2	2
Weaver Crim Corp.		1	1	2
Westexas Oil & Roy. Corp.		1		1
Westheimer-Daube-Cox & Hamon		1	1	2
Woodley Petroleum Co.		1	4	5
Total	15	86	189	290
Total previous week	20	99	180	299

GREGG COUNTY OPERATIONS

Operator—	Locations	Derricks & Rigs	Active Total	Total
Arkansas Fuel Oil Co.	1	1	2	4
Arkansas-Yount-Lee Oil Co.	1			1
Barkley & Lincoln		1		1
Beeler & Beeler		1		1
Blackwell Oil Co.			1	1
Claude Bell & R. A. Graddy, Inc.			1	1
D. H. Byrd-Gulf-Humble et al		1		1
Cranfill-Reynolds Co.		2	1	3
Crump & Hanagan	1		1	2
Daisy Oil & Gas Co.		1		1
Danciger Oil & Ref. Co.		1		1
Davis & Russell			1	1
Daniel & Tom C. Patten			2	2
Tom David (was Leonard Pet. Co.)		1		1
Joe DeGlazier et al		1		1
Harry W. Elliott et al			1	1
E. E. Eslick & Little		1	1	2
Flannigan Prod. Co.		1		1
R. L. Force & Shasta Oil Co.	1			1
Frank Foster-East Texas Refining Co.			1	1
Frank Foster & Rhodes		1		1
A. H. Gibson & Adams		1		1
Mamie Hammonds-Clark et al			1	1
Heep Oil Corp.			1	1
Herden & Woodard		1		1
Ed. B. Hopkins & A. R. Byrd, Jr.			1	1
Houston Oil Co.		1		1
Pat Hudson & Geo. McCamey		1		1
W. D. Humphreys et al			1	1
Humble Oil & Ref. Co.		1		1
S. F. Hurlburt & Brown			1	1
Hunter-Rowe et al		1		1
C. C. Julian Oil Co.		1		1
Kilgore Central Oil Co.		1		1
H. P. Key et al		1		1
Marlan Oil Synd.		1		1
Mid-Kansas O&G Co.		3		3
Magnolia Petroleum Co.		1	3	4
McMillan Pet. Co.			1	1
Moss et al			1	1
Navarro Oil Co.				
Norton & Holmes		1		1
John W. Olvey et al		1		1
Oriental Oil Co.	1	1		2
Pace et al		1		1
Phares & Sample		1		1
Primrose Ref. Co.-Penn-Worth Oil Prod. Co.			1	1
Pilot Oil Co.			1	1
Republic Prod. Co.	1		1	2
C. Rosenfield (Rose Oil Corp.)			1	1
Roeser-Pendleton, Inc., et al			1	1
Robert et al		1		1
Jim Rush-Simms- Hubbard			1	1
Selby Oil & Gas Co.			1	1
Shell Petroleum Corp.		1		1
Sinclair O&G Co.		1		1
Skipper Oil Co. & Lacey			2	2
Smith et al		1		1
Stanolind O&G Co.-Simms Oil Co.			1	1
Sutton & Daniels		1		1
Sultan Oil Co.			1	1
Sultan Oil Co. & McDaniel		1		1
Sutton et al		1		1
Texas Unity Oil Co.	2	2		4
Tidal Oil Co.			1	1
Tidal-Jim Evans & J. K. Wadley			1	1
Paul Vitek et al			1	1
W. L. Wollett (was F. D. Prince)			1	1
J. A. Weir et al		1		1
K. Z. Werby & McMinn et al			1	1
Pat J. White et al		1		1
Wise & Jackson	1			1
Yount-Lee Oil Co.		2	2	4
Total	9	48	42	99
Total previous week	2	42	42	86
Total both counties	24	134	231	389
Total previous week both counties	22	141	222	385

GREGG COUNTY OPERATIONS

Operator—	Locations	Derricks & Rigs	Active Tests	Total
Alco Oil Corp.			1	1
Jule Alford et al		1		1
J. L. Anderson et al		1		1
W. M. Angle & Brytex Oil Co.		1		1

Gregg County Producers—Longview Field

	Elev.	Pecan Chalk	Austin Chalk	Producing Horizon	Total Depth	Date Comp.	Initial Prod.	Current Production or status
Arkansas Fuel Oil Co.'s F. K. Lathrop 1-B	414	2578-2955	3534-....	3588-3607	3608	3-26-31	12,000	*4100
F. K. Lathrop 1-C	...	2414-2982	....-....	3600-3612	3628			Completing
P. D. Harrison 1	...	2455-2964	....-....	3540-....	3563			Coring sand
R. S. McKinley 1	395	2446-2958	3535-3556	3578-3600	3600	3-12-31	15,000	*5150
Arkansas Fuel-Yount-Lee Oil Co.'s								
F. K. Lathrop 1-A	401	2458-2870	3528-3554	3569-3587	3587	1-26-31	12,000	*725
F. K. Lathrop 2-A	420	2488-2984	....-....	3590-3613	3613	3-28-31	15,000	*2750
F. K. Lathrop 3-A	415	2415-2978	3530-....	3583-3605	3605	3-27-31	15,000	*2835
Harry W. Elliott et al's S. G. Andrews 1	374	2565-3016	3472-....	3636-3650	3650	4- 1-31	15,000	Shutin
Alco Oil Corp.'s Castleberry 1	...	2274-2813	3383-3440	3444-3451	3495		Top Del Rio 3472 ft.	
E. E. Eslick-Little et al's Springhill Church 1	411	2441-2938	3547-3578	3597-3621	3623	3-25-31	7,500	*600
Frank Foster-East Texas Ref. Co.'s Jasper Rodden 1	333	2320-2882	3464-3494	....-3534	3542	3-13-31	3,000	*2360
Mrs. Mamie Hammond et al's J. M. Hamby 1	376	2507-3015	3600-....	....-....	3728	3-30-31	D&A (top Georgetown 3685 ft.)	
O. L. Hickman et al's Maude Smith 1	373	2300-2925	3476-3514	....-....	3580	3-21-31	D&A (top Georgetown 3555 ft.)	
S. F. Hurlburt et al's A. J. Page 1	438	2440-3012	....-3658	....-....	3690	3-22-31	D&A (top Georgetown 3667 ft.)	
Magnolia Pet. Co.'s B. E. Rodden 1	417	2411-2955	....-....	3597-3616	3616	3-15-31	15,000	
B. E. Rodden 2	409	2485-2938	3540-....	3587-3603	3603	4- 1-31	12,000 —*110	
K. E. Merren-Miller-Van Horn's Maud Smith (10-ac.) 1	377	2373-2941	3415-....	....-....	3605	3-19-31	D&A (top Georgetown 3550 ft.)	
Navarro Oil Co. et al's G. B. Tenery 1	419	2585-2981	3564-3581	3587-3601	3603	3-18-31	7,500	Shutin
W. C. Ray Drilling Co.'s Maud Smith 1	374	2339-2938	3458-3511	....-....	3570	3-21-31	D&A (top Georgetown 3546 ft.)	
Roeser-Pendleton, Inc.-Foster-East Texas Ref. Co.'s B. E. Rodden 1	408	2405-2898	3531-3570	3575-3592	3592	3-12-31	15,000	
B. E. Rodden 2	...	2376-2963	3509-....	3558-....	3563			Cemented casing
Shell Pet. Corp.'s J. D. Davis 1	404	2359-2983	3482-3560	3596-3606	3630	4- 2-31	7,500	*2880
Sultan Oil Co.'s S. F. Thrasher 1	328	2420-2910	3496-3510	3533-3564	3564			Completing
Selby O.&G. Co.'s P. J. Snavely 1	273	2488-....	3464-3508	3528-3534	....			
				3572-3583	3583			Completing
Jim Rush-G. E. Hubbard-Simms Oil Co.'s G. B. Tenery 1	413	2462-2960	3520-3536	....-....	3545			Cemented casing
Simms Oil Co.-Stanolind O.&G. Co.'s G. B. Tenery 1	398	2550-3008	3545-....	3562-3580	3580	3-29-31	12,000	Shutin
Tidal Oil Co.'s F. K. Lathrop 1	430	2465-3075	....-....	3603-....	3656		Testing (top Georgetown 3634 ft.)	
Tidal-J. K. Wadley-Evans' A. A. Castleberry 1	416	2430-3975	3545-....	....-....	3580			Coring
Ben Youngblood et al's Wm. M. Lamb 1	399	2417-2915	3483-....	....-....	3619	4- 1-31	D&A (top Georgetown 3534 ft.)	
Cranfill-Reynolds Co.'s King-Blackburn 1	...	2550-2975	....-....	3595-....	3601			Cemented casing
		SMITH COUNTY						
Guy V. Lewis et al's S. S. Cook 1	...	2736-3103	3535-3620	3675-3698	3698	3-30-31	12,000	* 1000
		UPSHUR COUNTY						
Tips DeArmand-Capps et al's Chas. Cobb 1	428	2591-3118	3723-3775	3777-3842	3864	4- 2-31	D&A (Salt water in Wood-Woodbine sand)	
McGinley Corp.'s Reeves-Merritt 1	358	2570-2930	3487-3523	....-....	4004	3-21-31	D&A	

Rusk-Gregg County Producers—Kilgore Field

H. L. Blackstock et al's W. P. Brightwell 1	371	2600-3070	....-....	3672-3684	3684	3-29-31	10,000 —*1135	
W. P. Brightwell 2	341	2660-3100	....-....	3600-3720	3720	4- 3-31	7,500	
Burton Drl. Co.-Sabine Synd.'s E. B. S. Florey 1	354	2650-3070	3540-....	3710-3729	3729	3-15-31	10,000	Shutin
Geo. Thompson 1	437	2600-2986	3445-3612	3621-3660	3705	3-23-31	7,500	Shut in
W. L. Brandon-McCamey et al's J. F. Richards 1	339	2541-2927	3428-....	....-3574	3574	3-27-31	D&A (top Georgetown 3562 ft.)	
D. H. Byrd-Gulf Prod. Co. et al's Frank Elder 1	341	2418-2920	3374-3439	....-....	4012	3-30-31	D&A (top Georgetown 3566 ft.)	
Cordova Union Oil Corp. et al's C. O. Christian 1	442	2632-3057	3521-3600	3679-3705	3705	3- 4-31	10,000	*3100
C. O. Christian 3	...	2630-3065	3495-....	3667-3716	3716			Testing
Daniel & T. C. Patten (or Clark & Cowden's) J. T. Mercer 1	...	2400-2840	3416-3536	....-....	3593	4- 2-31	D&A (top Georgetown 3551 ft.)	
W. H. Dunning & J. H. Markham's J. N. Peterson 1	...	2636-3109	3468-3590	3654-3726	3726	3-31-31	15,000	*350
J. N. Peterson 2	386	2615-3031	....-....	3628-3685	3698	4- 5-31	15,000	*715
Federated Oil Co.'s B. F. Laird 1	400	2607-3013	3480-....	3624-3654	3654	3- 1-31	10,000	Shutin
B. F. Laird 2	470	2639-3038	3536-3591	3690-....	3699		Cem 7-in cas 3686 ft.	
Gulf Prod. Co.'s Fred Birdsong 1	...	2560-....	3507-....	....-....	3561			Cem 7-in cas.
R. M. Griffin 1	396	2615-3010	3475-3616	3616-3706	3706	4- 5-31	20,000	*1,000
Heep Oil Corp.'s J. E. Bean 1	405	2568-3020	3460-....	3638-3676	3676	3-31-31	8,000	*350
Houston Oil Co.'s W. R. Crim 1	463	2650-3073	3620-....	3709-....	3740			Coring sand
S. S. Laird 1	423	2602-3033	3530-3590	....-....	3640			Cem 7-in. cas.
Humble O.&R. Co.'s L. D. Crim 1	403	2608-3014	3480-3552	3640-3652	3652	12-28-31	15,000	Shutin
L. D. Crim 2	487	2610-3090	3500-....	3699-3724	3724	2-27-31	12,000	
L. D. Crim 3	466	2615-3067	3545-....	3690-3720	3720	3- 5-31	12,000	*16,275
L. D. Crim 4	450	2650-3070	3497-3629	3672-3708	3708	3-11-31	12,000	
L. D. Crim 5	433	2682-3109	3496-....	3661-3690	3690	3-15-31	10,000	
L. D. Crim 7	366	2617-3042	3476-....	....-3682	3682	4- 3-31	5,000	
L. D. Crim 8	387	2535-....	....-....	3640-3694	3694	3-29-31	12,000	*2270
L. D. Crim 9	457	2610-....	3495-3609	3683-3725	3725	3-22-31	15,000	
L. D. Crim 10	463	2661-....	3526-....	3691-3745	3777			Completing
L. D. Crim 11	...	2620-3094	....-....	3701-3783	3783			Completing
L. D. Crim 12	442	2611-3085	3550-....	3675-3698	3702			Completing
Ben Laird 1	403	2631-3062	3452-....	3605-3647	3647	3- 9-31	10,000	*200
Ben Laird 2	350	2620-3048	3457-3568	3568-3664	3664			Completing
S. S. Laird 1-A	...	2500-....	3467-....	3597-....	3630			Coring sand
S. S. Laird 2-A	447	2595-3005	3510-....	3630-3733	3733	3-29-31	12,000	*1345
J. N. Peterson 1-A	397	2632-3060	3475-3575	3616-3656	3656	3-10-31	15,000	*205
J. N. Peterson 2-A	467	2608-3045	3538-....	3670-3770	3770	3-25-31	20,000	
J. N. Peterson 4-A	445	2647-3030	3492-....	3655-3760	3760	3-27-31	15,000	*4095
Hunter-Rowe et al's J. R. Watson 1	384	2545-2972	3467-....	3598-3637	3637	3-24-31	15,000	*260
Ed. M. Jones-Houston Oil Co.'s J. M. Crim 1-B	455	2606-3050	3550-....	3666-3693	3695	3-18-31	10,000	*8500
W. R. Crim (10-ac.) 1	440	2631-3060	3540-3601	3675-3695	3695	2-20-31	15,000	
W. R. Crim (10-ac.) 2	437	2610-3075	3555-....	3686-3718	3718	3-24-31	12,000 —*11,400	
D. M. Peterson 1-A	479	2625-3050	....-....	3670-3771	3771	4- 2-31	10,000	*4500
Karona Oil Co.'s J. N. Peterson 1	360	2544-2979	3478-....	3601-3616	3616	3- 1-31	10,000 —*1000	
J. N. Peterson 2	376	2595-3009	3485-....	3624-3677	3677	4- 2-31	7,500	
Leonard Pet. Co.'s Adams 1	...	2365-2730	3145-....	....-....	3334	4- 2-31	D&A (top Georgetown 3269 ft.)	
Louisiana-Texas Oil Corp. & C. H. Lyons' Major Kennedy 1	472	2658-3057	3610-....	3665-....	3691			Cemented casing
Luling Oil & Gas Co.'s Brightwell 1	356	2560-3053	....-....	3604-3630	3630	3-18-31	15,000	Shutin
Magnolia Pet. Co.'s Della Crim 1	434	2616-3098	3535-3596	3688-3712	3712	3- 7-31	15,000	*6050
Della Crim 2	360	2580-3029	3424-....	3604-3617	3617	3-16-31	15,000	300
Della Crim 3-A	405	2590-3060	3460-....	3640-....	3658			Cemented casing
Della Crim 4	381	2610-....	....-....	3640-3660	3660	3-20-31	20,000	950
Della Crim 5	389	2595-3017	3500-....	3637-3657	3657	3-31-31	18,000	175
E. B. F. Florey 1	...	2610-3025	3448-....	3647-....				Cemented casing

	Elev.	Pecan Chalk	Austin Chalk	Producing Horizon	Total Depth	Date Comp.	Initial Prod.	Current Production or status
Ben Laird 1	369	2575-2990	3476-....	3574-3587	3587	3-27-31	25,000	*700
Marine Corp's Nat. Bean 1	403	2600-2996	3420-....	3600-....				Cemented casing
Navarro Oil Co.'s R. N. Blackstock 1	422	2607-3068	3529-....	3666-3704	3704	3-29-31	10,000	*200
John W. Olvey-Sample's W. R. Crim (20-ac.) 1	458	2645-3078	3558-3612	3688-3708	3708	2-21-31	15,000	—*10,965
W. R. Crim (20-ac.) 2	475	2640-3093	3575-....	3708-3720	3720	3-29-31	12,000	
Pearl Oil Co. (Paul Vitek's) G. W. Eaton 1	450	2714-3090	3516-....	3684-....	3685			Cemented casing
H. R. Smith-Houston Oil Co.'s D. M. Peterson 1	446	2638-3036	3520-....	3660-3698	3698	2-25-31	10,000	*7150
D. M. Peterson 2	469	2610-3100	3525-3585	3676-....	3682			Cemented casing
H. R. Smith-Gulf Prod. Co.'s D. M. Peterson 1	441	2580-3015	3535-....	3660-3749	3749	4- 3-31	15,000	*500
Stanolind O.&G. Co.'s Ben Laird 1	430	2625-3135	3499-....	3624-3754	3754	3-31-31	12,000	*2970
Ben Laird 2	448	2602-3042	....-3546	3655-3767	3767			Completing
J. R. Travis (Holloway-Hardin's) A. G. Morton 1	...	2490-2840	3435-3517	....-....	3561	3-27-31	D&A 3533	(top Georgetown ft.)
C. E. Upchurch et al's W. P. Brightwell 1	340	2600-....	3515-....	3608-3677	3677	3-29-31	10,000	*900
Westheimer-Daube-Cox & Jake Hamon's D. M. Peterson 1	446	2630-3086	3553-....	....-....	3642	4- 1-31	15,000	Shutin
Ward Oil Corp.-J. R. Elliott & Johnston's E. S. Thrash 1	...	2764-3168	3548-3584	3753-....	3773			Cemented casing
Woodley Pet. Co.'s Joe Ladd 1	369	2585-3015	....-....	....-....	3592			Cemented casing
D. M. Peterson 1	446	2630-3086	3553-....	....-....	3642			Cemented casing

*Indicates production pinched.

Rusk-Gregg Area Indicated Five Miles Wide Both Ends

Tyler, Texas.—Uniform width of more than five miles on the opposite ends of the Rusk-Gregg County oil area became established during the past week by the completion of big wells, with the western limits remaining to be determined. Selby Oil & Gas Company's Snavely 1, located between Gladewater and the Sabine River in western Gregg County, was completed early this week with an estimated flow of 12,000 barrels oil daily from broken sand at 3528 to 3583 feet. This completion temporarily affords the north end of the oil area the greatest width.

A well equally as large was completed early last week by Guy V. Lewis et al's Cook 1, located in eastern Smith County and opposite the Joiner field, thereby giving the latter field a width of about five miles. Although the connection of the Joiner and Kilgore fields has been conceded for weeks, positive proof was offered during the past week when Devonian Oil Company and Gulf Production Company's Motley 1, located north of Overton, cored oil saturated sand at 3652 to 3663 feet. On a line between this outpost well and the Joiner field, Pearl Oil Company's Eaton 1 cored sand at 3681 to 3683 feet, and just north of London the joint test of Ward Oil Corporation, J. R. Elliott and Johnston Bros., on the Thrash farm, cored sand at 3753 to 3803 feet. This trio of tests are certain to make big producers, based on the porosity of the recovered oil sand cores.

Another failure to the east of the Longview field was recorded when Tidal Oil Company and others' Castleberry 1 entered Georgetown lime at 3612 to 3614 feet, without logging any Woodbine sand. An important extension to the northwest of the Longview field was scored when Sultan Oil Company's Thrasher 1 gauged 375 barrels first 30 minutes then 438 barrels the next 30 minutes from regular sand at a total depth of 3564 feet.

Start Work on Two Pipe Lines From Gregg-Rusk County Field

Shreveport.—Work was started during the past week on two oil lines from the Gregg-Rusk field to Shreveport. Arkansas Fuel Oil Company on Monday, April 6, had welded a total of five miles of its 8⅝-inch electrically welded 66-mile line from the Gregg County part of the field and had started work on its pumping station being erected just outside Longview. It has erected two 55,000-barrel tanks in the Hamilton McNutt Survey extending over into the Isaac Skillern Survey. The two tanks were from warehouse stock.

Atlas Pipe Line Company, Incorporated, on Monday, April 6, had started welding its 57 miles of eight-inch line from its Jewella refinery here to a pump station in the S. P. Ford Survey, two miles south and west of Longview. It is erecting three 80,000-barrel tanks there. The pump station will have two 200 horsepower De Lavergne engines each with a pumping capacity of 11,000 barrels. Worthington pumps are to be used. Officials of the Atlas Company expect to complete the line by May 1, with good weather existing.

Neither the former nor Arkansas Fuel Oil Company has posted a price on the East Texas crude. The former has not contracted for any oil since February, when it contracted for the output of J. W. Olvey, now a large stockholder in the company. The price was not announced here. No posted price will be posted by this company, officials said, until the line is completed.

Arkansas Fuel Oil Company has all it can handle, it was stated, from its own Gregg County wells, and is not buying any oil.

Another Producer Added in Saxet Field, Nueces County

San Antonio, Texas.—Another producer was added to the Saxet field, Nueces County, during the past week and still another well was in the process of completion. Saxet Oil Company's Dunn 7 is making around 90 barrels of oil and about 30,000,000 cubic feet of gas from 4296 feet. It is showing 1250 pounds rock pressure.

Moody-Seagraves Producing Company's Sedwick 1 is in the process of completion after setting casing on the sand at 4097 feet. The well is 1200 feet north of Houston Oil Company's Hunter 1 producer and will extend the field considerably. It was showing oil and 225 pounds rock pressure while cleaning itself April 6.

After drilling to 4220 feet and testing salt water, Bess et al's Boorey 1, has been plugged back to 4050 feet and will test a sand at 4037-46 feet. This formation showed 750 pounds pressure and a little oil in three minutes. Should it be completed as a producer, it will extend the Saxet field 2½ miles to the northwest.

Houston Oil Company is giving the Ague Dulce field, also in Nueces County, a real deep test in its Ollie Purl 1-B, Block 7, R. Peters Survey No. 2. This test already has reached a 5886-foot level and likely will be sunk to 6500 feet if production is not found sooner. It is nearing the deepest formation ever tested in this particular section.

South Texas Field Developments

EARL POST, *Staff Correspondent, San Antonio, Texas*

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Third Extension of Discovery Pool in Bee County is Assured

San Antonio, Texas.—The third extension for the discovery pool, Pettus, in Bee County, is practically assured as United Production Company set casing at 3957 feet in its Ray 35. This well cored a sand at 3958-65 feet, which showed sufficient saturation to indicate a producer.

The well is 3000 feet from the tests grouped around the original producers in the field and its successful completion opens additional acreage to drill. It is 1100 feet due east of Ray 34, which recently extended the field when it came in as a producer at the regular horizon. The Ray 34 is in turn 1000 feet east of the Ray 26, first east extension well. The Ray 26 widened the field 900 feet in January, when it came in as a gasser and then turned to a 300-barrel oil well.

The exact location of the Ray 35 is 3253 feet along the southwest line from the southwest corner of the Thomas Hanson Survey, thence 1567 feet northeast at right angles from the southwest line.

The next well expected to be on production is United Production Company's Ray 36, a short distance north of the extension wells. This test, also in the T. Hanson Survey, is reported running about right to make a producer. It has the bottom of the hole below 3358 feet. Its completion likely will bring about further wildcatting to the northeast.

In the Grayburg district, seven miles southwest of the Pettus townsite, Mineral Oil Company (formerly known as Mauldin and Fisher) is setting casing in A. J. Kimball 1 above a sand cored at 3537-40 feet, which showed 175 pounds pressure in three and one-half minutes recently. This well is 300 feet south and 21 degrees east of Grayburg Oil Company's original producer on the Kimball lease, which made several hundred barrels initial from 3545-55 feet last summer, but later fell off production completely. To date, a number of tests have been drilled in the vicinity, but none of them have been successfully completed.

Several wildcats are drilling in Bee County at this time, but none of them have reached interesting stages.

Darst Creek Field's Latest Schedule is 20,000 Barrels

San Antonio, Texas.—The average decline in the Darst Creek field, Guadalupe County, from January 29 to April 1 was four per cent, according to figures just released by Umpire H. H. Fitzpatrick for the new proration schedule which went into effect on that date to continue until May 1. The new schedule shows a total potential production of 150,592 barrels from 259 wells and allows 20,000 barrels daily, being 12.624 per cent of the total.

Several more completions are recorded in the field. Sun Oil Company's C. Knobloch 14 gauged 1740 barrels potential, no water, while the Magnolia Petroleum Company's Rand Miller 8 gauged 792 barrels of fluid, 103 barrels of which was net oil. Both tests are producing from the Edwards lime, regular horizon of the field.

Refugio Completions Recorded In Both Deep and Shallow Sands

San Antonio, Texas.—Additional producers were completed in the deep and so-called shallow sands at Refugio during the week.

Houston Oil Company's Helen Ryals 4 is making about 250 barrels of oil and about 500 barrels of water in a sand at 3664-68 feet. United Production Company's Mitchell 4 is an 800-barrel producer through a one-fourth-inch choke at 6451 feet. It is showing 1100 pounds on the tubing.

The well that is holding probably the greatest interest at this time is Houston Oil Company's Rooke 1-B, two miles southwest of Refugio and one-half mile west of production in the field. This well has reached a depth of 6804 feet, about 350 feet below the lowest producing level.

A number of wells are in process of completion. Houston Oil Company has installed a gas jet in its Wilson Heard 5 at 3686 feet. Moody-Seagraves' O'Conner 6, abandoned recently at 6474 feet, is preparing to work over in attempt to complete as a producer; same operators' Shelly 1, waiting on cement at 6456 feet, bottom of the hole is 6459 feet. The same operators' Mercy Academy 2, swabbing in at a total depth of 6417 feet; casing is set at 6388 feet. United Production Company's Mitchell 2, swabbing in at 6440 feet. Same company's O'Brien 5, coring the sands below 6400 feet; Fox 3, waiting on cement at 6344 feet, bottom of the hole is 6353 feet; O'Brien 10, casing set at 6454 feet; O'Brien 11, coring gas sand 6369 feet. Others are nearing the producing horizons.

Discover New Gas Sand in Muckelroy Extension Pool

San Antonio, Texas.—A new gas sand was discovered in the Muckelroy extension pool, Zapata County, during the past week when S. R. & C. Oil Company's Montemayor 5-D tested for a large gasser at 1492 feet. The well originally had a sand at 1300-18 feet, which showed salt water and oil and was then drilled to the present total depth, finding alternate sands. Casing is set at 1298 feet.

The testing tool was run to 1337 feet where it was opened for the test of 155 feet of open hole. When the tester was closed, the gas began leaking out around the casing, making it practically impossible to remove either the drill stem or the tester. The well has been plugged and abandoned as a result, but a second test is announced for the near future. The exact location is 660 feet from the west line and 150 feet from the south line of Block 8, Survey 64.

In the south end of the field, W. R. Shankle is completing his Garza 3 on Block 10 of the Zorro ranch. This well has casing set at 1370 feet. It logged sand at 1370 feet, cap at 1370-72 feet, sand at 1372-75 feet.

Gulf Coast Field Developments

JACK LOGAN, *Staff Representative, Houston, Texas*

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Record Initial Established On West Side of Barbers Hill

Houston.—Sun Oil Company established record initial production for the west side of the field at Barbers Hill last week when its Smith 1 was brought in for an estimated 3125 barrels daily from 5450 feet. This well is located 250 feet west of the east line in the center of a 20-acre tract in the W. D. Smith Survey.

Production from the well is flowing through two one-half inch chokes with an estimated pressure of 600 pounds per square inch. A total of nine joints of screen, blank and blank liner were set on the bottom of the hole.

Mills Bennett Production Company has completed Fisher 2 on the southwest flank of the dome for 915 barrels daily at 5245 feet. The producer is flowing through three-eighths inch choke with a recorded pressure of 350 pounds. The Texas Company's Marion Williams 1 has been abandoned at 6965 feet. This test, located on the southwest flank of the field 50 feet south and west at right angles out of the northeast corner of the tract, was started last June and has encountered considerable difficulty during the time it was being drilled. The operators of the well made an attempt to bring the well in as a producer two weeks ago when they set 74 feet of screen with a full string of 4½-inch liner and tried to wash it but the test proved unsuccessful.

Sun Oil Company has set one joint of five-inch screen in its Chambers County Agricultural Association 8 and is preparing to swab the well at 4520 feet.

Saxet Company Is Acquired By Moody-Seagraves-Morgan

Houston.—Following approval of stockholders, the Saxet Company has been acquired by the Moody-Seagraves-Morgan interests; and its properties will be merged with those of the Moody-Seagraves Producing Company and of T. P. Morgan, all to be operated henceforth under the name of the Saxet Oil Company, with headquarters comprising the whole thirteenth floor of the Esperson building, Houston. The Saxet offices, formerly located on another floor of that building, have already been transferred to the new location.

O. R. Seagraves, vice-chairman of the board of United Gas Corporation and chairman of Freeport Sulphur Company, has been made chairman of the board of the new Saxet Oil Company, and W. F. Morgan has been named president. In addition to those men, the new board of directors includes W. L. Moody III, G. F. Blaine, S. R. Merrill, W. L. Pearson, and C. E. Morrow.

Total assets of the company including the new properties are valued by independent engineers at $18,500,000. Authorized common capitalization has been increased from 1,000,000 to 2,000,000 shares. Operations and properties are centered on the Texas Gulf Coast, where the company produces natural gas, oil, and gravel. Oil production is now around 10,000 barrels daily from properties in seven fields, and approximately 32,000,000 cubic feet of natural gas are sold daily to United Gas Corporation and to the city of Corpus Christi.

Two Wells Are Completed In Pierce Junction Field

Houston.—Field results in the Pierce Junction field during the past week were confined to two completions, one of these proving a failure when Bender 1 of Mike Kouri and Grayburg Oil Company was abandoned at 4205 feet. This test gave promise of making a producer last week after 15 feet of oil sand had been penetrated. The test showed salt water and the well was cemented off bottom but failed to develop production.

Rio Bravo Oil Company completed G. H. & S. A. 102, B.B.B.&C. Survey 1028, 35 feet south of the center of the railroad track and 50 feet east of G. H. & S. A. 101, for initial production of 75 barrels. Top of the sand was struck in the well at 4398 and the sand was penetrated to total depth of 4441 feet. Two-inch tubing was run in the well and 50 feet of screen was set on bottom of the hole. A decrease in the production of the well, which is now flowing by heads, at the rate of approximately 45 barrels daily, has made it necessary to rig up for pumping. The two-inch tubing is being pulled and three-inch tubing will be run in the well and pumping unit will be installed.

Test Is Abandoned in Salt On Jefferson Island Dome

Houston.—Jefferson Lake Oil Company has abandoned Lake Peigneur 10 on Jefferson Island dome, Iberia Parish, in salt at 2270 feet. Top of the salt was encountered at 2170 feet.

A favorable show was passed up at 1885 feet when water ruined all chances of making a commercial producer of the test. Four joints of screen were set and 21 gravity oil was bailed from the hole. Fluid was standing 800 feet in the hole and it was estimated that the well would pump between 50 and 60 barrels of oil before the water showed up.

Lake Peigneur 11 of the same company, located south 84 degrees and west 3020 feet from the northeast corner of Section 58-12s-5e, hit top of the cap rock at 598 feet and is now drilling at 780 feet in rock.

Shell Completes Producer In South Louisiana Field

Houston.—Production in the Black Bayou field was given a substantial increase last week when Shell Petroleum Corporation completed Watkins 16 for initial production of 500 barrels at 4519 feet. The well, formerly designated as Yount-Lee 16, is located in Cameron Parish, 1590 feet west of the east line and 1610 feet south of the north line of the northeast quarter of Section 18-12s-12w, on the south flank of the field.

An oil show was passed up at 4193-4213 feet after a test showed salt water. Casing was set at 4419 feet. The other test of Shell Petroleum Corporation that is being drilled in the Black Bayou field, Black Bayou State 2, is in salt at 4290 feet. Top of the salt was found at 4207 feet.

ECONOMIC REPORT SUBMITTED AT WASHINGTON CONFERENCE

(*Continued from page* 51)

"The estimated total requirement of domestic crude oil, 461,434,000 barrels, represents an average daily requirement, during the period, of 2,521,500 barrels. In its completed report, the committee will direct attention to its estimate that the average daily requirements will not be reached during the first three months of the period, since it is indicated that the domestic crude oil requirements, on a monthly basis, will show the following daily averages:

April	2,408,800 barrels
May	2,450,400 barrels
June	2,481,200 barrels
July	2,569,800 barrels
August	2,617,100 barrels
September	2,599,200 barrels

"During the period from September 30, 1930, to February 28, 1931, the last date for which complete data are available, stocks of crude oil held in the field and by pipe line companies were reduced from 475,223,000 barrels to 461,953,000 barrels, a decline of 13,270,000 barrels, or at the daily rate of 87,881 barrels. If the same average rate of decline should continue throughout the period under consideration, field and pipe line stocks of domestic crude oil would be further reduced by 16,082,000 barrels. If a similar quantity of domestic crude oil should be withdrawn from storage during the 1931 period, the crude oil requirements to be met from domestic production would amount to 445,352,000 barrels, the difference between the total domestic crude oil requirement of 461,434,000 barrels and the stock withdrawal of 16,082,000 barrels. Domestic crude oil production, amounting to 445,352,000 barrels during the period, would be at an average daily rate of 2,433,600 barrels.

"Should it be determined by the oil industry that crude oil inventories should be liquidated to a degree comparable with that indicated, it would follow that an average daily rate of 2,450,000 barrels might be established as the daily maximum at which domestic crude oil should be produced during any portion of the period now under consideration.

"Data are not available showing the quantity of crude oil held in or drawn from field storage in each of the producing states, as such statistical information is divided by major producing areas without regard to state boundaries. The committee, consequently, is not in a position to indicate the relative extent to which field crude oil stocks should be reduced in each of the major producing states. Having estimated the relative proportions of the domestic crude oil requirements which may be allocated to each of the major producing states, the committee believes that the decision as to the quantity which should be drawn from storage and that which should be supplied through production, is one which may best be determined by the oil industry in each of the states.

"The committee is of the opinion that many of the estimates of potential production, which have been accepted as reliable are in excess of what should be regarded as true potentials and that the formulation of more accurate estimates would be of economic benefit to the oil industry. It is suggested, therefore, that a committee of competent petroleum engineers be designated by the oil industry promptly to consider the possibility of developing a method for more uniformly estimating potential crude oil production."

Baker, Mont.—Another very good gasser has recently been completed in the Baker-Glendive area in Eastern Montana. Well is that of Monarch Gas Company and is good for 16,000,000 feet of gas from a depth of 860 feet.

▼ NEW MEXICO - ROCKY MOUNTAIN AREA ▼

Eunice Well Output Set At 50 Barrels Per Day

Hobbs, New Mexico.—Voluntary restriction of production in the Eunice field, Lea County, to 50 barrels daily per well was put into effect April 1 by operators after unsuccessful efforts to obtain a market outlet. This field has eight flowing wells from the 3900-4000-foot lime horizon. Plans to shut in single wells held by Geo. F. Getty Oil Company, The California Company and two nearby producers held jointly by Continental Oil Company and The California Company have been abandoned, and these four producers will be allowed to produce 50 barrels daily. The former concern is without a connection, and during the time that it is off production the nearby wells are to remain inactive.

Gypsy Oil Company added the first producer in the Hobbs field in more than a month by registering an initial flow of 5185 barrels oil and 5,000,000 cubic feet of gas from lime at 3975-4005 feet. This producer is the seventh held by the company on the Grimes lease, which is surrounded by production.

Big Muddy Field Deep Test Good for 200 Barrels Daily

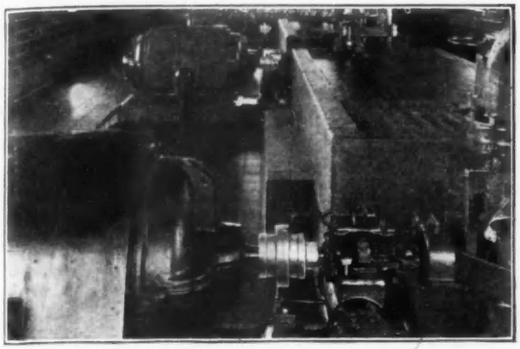
Casper, Wyo.—Ohio Oil Company's deep test in the Big Muddy field, east of Casper, is flowing by heads from 4367 feet and is about 22 feet in the Lakota sand. The well would be good, natural, for at least 200 barrels per day. It is being swabbed and bailed to test for any possible showing of water, as well as to ascertain whether or not it might not be made to flow continuously.

Big Muddy field has been one of the most consistent producers in Wyoming, and discovery of good production in the Lakota sand is particularly interesting and important. There are two wells in the field which have produced about 100 barrels of oil and the same quantity of water from the Dakota sand for about six years, but Ohio Oil Company's test is the first to be carried on to the Lakota; this well had nothing more than showings of oil and gas in the Dakota sand.

Big Muddy field has produced more than 20,000,000 barrels of oil since its discovery in 1915. H. Leslie Parker, petroleum geologist, is credited with its discovery and promotion.

Casper, Wyo.—Although there has been some delay in definite announcements concerning plans of North Central Gas Company's gas pipe line from Central Wyoming to Eastern Wyoming and Western Nebraska communities, it is quite definitely understood now that details for the work are now almost complete and that an official statement will be made soon concerning the plans. Whether or not the company will lay the line itself will be announced, and if not, the name of the contractor will be given out. The entire project will cost about $6,000,000; it will furnish gas to Laramie, in Southeastern Wyoming, in addition to the towns mentioned.

Coupling Replacements Banished



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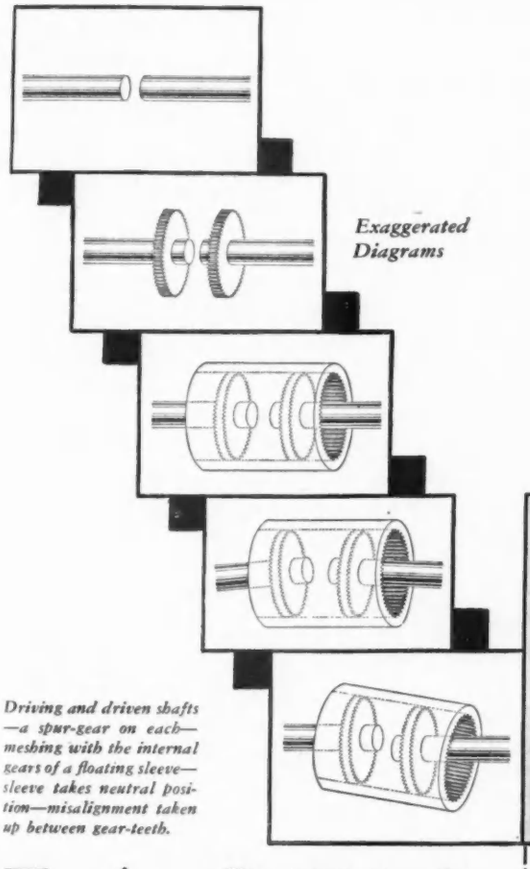

Exaggerated Diagrams

Driving and driven shafts —a spur-gear on each— meshing with the internal gears of a floating sleeve— sleeve takes neutral position—misalignment taken up between gear-teeth.

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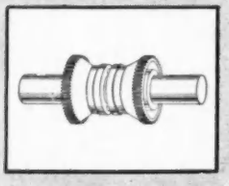
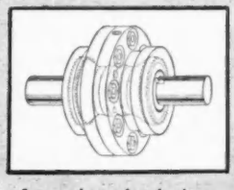
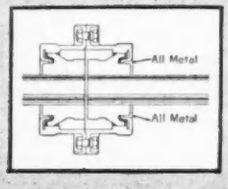


Two hubs carry generated gears.



Internal teeth of sleeve mesh with hub gears.



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Louisiana--Arkansas Field Notes

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Sabine Parish Test Holds Interest in Zwolle Field

Shreveport.—Chief interest in the Zwolle field during the past week was centered in Packard Oil Company's Davis 1, SW SW Section 8-7-10, Sabine Parish, eight miles east of the Zwolle southeast field's production. This test, which has elevation of 337 feet, was coring for the Zwolle marl contact below 2600 feet late in the week.

Ohio Oil Company's Bowman-Hicks 7, SW NE NE Section 2-7-12- in the south extension of the east Zwolle field, offsetting to the north a recent producer in the same section by H. W. Perritt in Bowman-Hicks 2, was completed at depth of 2386 feet flowing 50 barrels of oil daily by heads.

During the past week C. L. Jett, Trustee, using cable tools, deepened Jones 1, SE NE Section 31-8-12, a Zwolle townsite well which had dropped to a daily pumping yield of five barrels, at 2199 feet, and brought the well in at total depth of 2224 feet flowing 150 barrels daily.

One new location was made in the Zwolle field during the past week.

Plan 5500-Foot Test Just Outside City of Shreveport

Shreveport.—Pelican Natural Gas Company (Sam D. Hunter and associates), during the week ending April 4, started rigging up for a 5500-foot test just outside the northwest city limits of Shreveport. The test is Levi Cooper 1, 1810 feet east and 1064 feet north of northwest corner Section 29-18-14, Caddo Parish. The test will go to 5500 feet and it is expected in that depth to reach the upper Trinity. The location is on a block of 8500 acres adjacent to Cross Lake, Shreveport's water source.

This is the second 5500-foot test announced recently for this area, Gordon M. Garry having several weeks ago made location for Hatcher 1, NW NE Section 11-17-15, Caddo Parish, also announced as a 5500-foot test.

This particular territory just west of Shreveport is said to be at a junction of two axes, one extending from the Caddo oil fields in Pine Island southeasterly to the De Soto Parish oil fields, and the other extending northeast-southwest from the Bellevue shallow field of Bossier Parish to the Waskom gas field.

Bellevue is the highest geological point on the Sabine Uplift, the Nacatosh there being topped at subsea level of slightly more than 200 feet. The 750-foot contour encounters the Nacatosh at Shreveport.

The nearest deep test to Pelican Natural Gas Company's location was Empire Gas & Fuel Company's test drilled to 4600 feet in Section 33-17-13, it being abandoned as dry in anhydrites, the second anhydrite zone being topped at 4539 feet. The 5500-foot level is producing gas from the upper Trinity in the Rodessa field of northwest Caddo Parish, approximately 30 miles to the north. The Glen Rose at 3600-3900 feet in Pine Island has produced oil and gas.

An offset test to a gasser recently completed in the Tokio at the 2700-2800-foot level a mile north of shallow gas production in the Waskom (Greenwood) field of Caddo Parish, was abandoned as a dry hole during the past week when Pyramid Oil & Gas Company bailed dry in six feet of sand from 2779-85 feet in Wheeler 1, SE SW Section 9-18-16, the test being abandoned as dry at total depth of 2810 feet. Six and five-eighths-inch casing had been cemented at the top of the sand.

Another Caddo wildcat, Ralph Davidson and associates' F. Weiller 1, Section 33-17-13, southeast of Shreveport's city limits, tested hot salt water from 2440-47 feet and late last week was reaming to bottom at the latter depth. This test reached base of the Blossom at 1997 feet.

Fourth Commercial Gas Well Is Completed in Amory Field

Jackson, Miss.—The Amory gas field in Monroe County, Northeast Mississippi, where the first commercial gas was obtained in the state, added its fourth gasser Saturday, April 4, when Amory Petroleum Corporation's Harris 1, NW NE Section 18-13s-17w, blew out making an estimated daily gas yield of 5,000,000 feet. The well had previously bailed dry at 2350, 2356 and 2372 feet, after gas sand was topped at 2324 feet, where 6⅝-inch casing was cemented. As this is as large as any gasser so far completed in Amory, the well will probably be completed at 2400 feet. Elevation is 455 feet. The new gasser is a half mile southeast of the nearest gas production.

A half mile east of the gas production in the northwest part of the Jackson gas field in Hinds County, Love and associates during the week abandoned Payne 1, SE SW SW Section 27-6-1e, as a dry hole at 2544 feet in the Midway chalk. No new locations were made in the Jackson field during the week and only one test is active in the field, which has six wells shut down and two derricks up in the Hinds County part of the field, with two tests shut down, three derricks and one rig up in Rankin County.

Dixie Petroleum Company abandoned Clark 1, NW NW Section 6-16n-5e, Warren County, Vicksburg district, as a dry hole at 3090 feet in chalky shale. Elevation is 278 feet. Surface casing was set at 77 feet and 8¼-inch casing at 2186 feet to test an oil show in the Sparta at 2248 feet, but the test bailed dry at that level.

Pocahontas Natural Gas Company's Adams Banks Lumber Company 1, NE SW NW Section 10-3n-7e, a wildcat in Smith County, South Central Mississippi, tested 90 feet of fresh water in eight minutes in a drill stem test from 2732 to 2738 feet in the Wilcox and late last week was coring at 2941 feet. Elevation is 425 feet.

Vaughan and associates are blocking acreage in southeast Jefferson, southwest Copiah and northwest Lincoln Counties in South Central Mississippi, approximately 90 miles south of Jackson. There is said to be a magnetometer high in the vicinity of this block.

In Southwest Mississippi, Franklin County, two members of Gulf Refining Company's geological department are doing plane table work. In the same general area it is reported that Humble Oil & Refining Company is using airplanes in photographic reconnaissance work on its 100,000-acre block which lies in both Franklin and Wilkinson Counties.

Summary of Field Operations, March, 1931

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Production in East Texas Boosts March Total in U. S.

New Production, which had been declining during the past few months, was sharply increased in March as a result of successful development of producing properties in East Texas. While the number of wells completed in the United States during March was practically the same as in February, 819 against 815, new production increased from 459,727 barrels in February, to 704,526 barrels in March, a gain of 244,799 barrels. Texas contributed 322 new wells during March, an increase of 39 over February, while new oil production of that state showed a gain over February of 323,990 barrels. East Texas reported the completion of 62 new wells and a total initial oil production of 421,650 barrels, against a total for February of but 99,580 barrels.

As a result of unrestricted development in East Texas, production of crude has been increasing rapidly in the United States, having attained a daily rate of 2,302,000 barrels during March. This compares with a daily average during February of 2,128,600 barrels, a gain for March of 172,400 barrels daily. The increase in daily average crude production was, however, not all due to East Texas, since Oklahoma and California also reported increased production compared with February. Oklahoma's daily average production in March was 553,750 barrels, against 473,750 barrels in February; California reported a daily average production during March of 546,250 barrels, against 527,300 barrels in February; Texas, outside of Gulf Coast, was credited with a daily average production of 602,600 barrels, against 523,700 barrels in February.

The quantity of new oil production obtained in Oklahoma has shown a material decline under the figures of the final months of last year, having subsided to but 171,185 barrels for March, compared with 220,547 barrels in February. In contrast with the slump in initial production of Oklahoma is the sharp gain recorded in Texas, where initial production for March aggregated 504,856 barrels, against 180,866 barrels in February. In fact, Texas is now credited with more than 70 per cent of the total initial production of the United States. Of that proportion, East Texas has attained a standing of contributing 60 per cent of the new production of the country.

United States Production

State—	Daily Production March*	Daily Average March*	Total Average February
Oklahoma	16,612,850	553,750	473,750
Texas (Outside Gulf Coast)	18,077,650	602,600	523,700
Gulf Coast	5,506,600	183,550	185,600
Kansas	3,428,550	114,300	114,450
North Louisiana	1,248,900	41,600	43,950
Arkansas	1,472,550	49,100	49,950
Eastern States	3,375,400	112,500	109,800
Rocky Mountains	2,951,000	98,350	100,100
California	16,387,100	546,250	527,300
Total	69,060,600	2,302,000	2,128,600

*Preliminary—subject to revision.

United States Field Statistics

Following are the completions, showing oil wells, gas wells, failures and initial production of crude oil and gas by states for March as compiled by The Oil Weekly:

State—	Completions	Producers	Gas wells	Failures	Initial oil	Prod. gas*
Arkansas	11	5	1	5	553	¼
California	31	24	..	7	11,720	...
Illinois	8	1	..	7	3	...
Indiana	13	6	3	4	178	2½
Kansas	44	20	10	14	10,240	113¼
Kentucky	51	18	15	18	1,366	9½
Louisiana	39	11	4	24	3,755	93½
Michigan	3	1	1	1	130	½
Mississippi	8	..	2	6	...	60
Missouri	1	..	..	1	...	...
New York	5	4	..	1	15	...
New Mexico	1	..	..	1	...	...
Ohio	84	19	42	23	339	23½
Oklahoma	100	53	12	35	171,185	783¼
Pennsylvania	45	24	12	9	98	199¼
Texas	322	153	13	156	504,856	408
West Virginia	53	8	38	7	88	24½
Total	819	347	153	319	704,526	1,013½

*Millions of cubic feet.

Unfavorable Market Factor

Analysis of field statistics shows that the new East Texas area became a most unfavorable market factor in March, as a result of the completion of 55 producing wells of unusually high potential production. Rusk County held the limelight in March with 45 producers out of 47 wells completed, the producers being credited with a combined initial production of 297,150 barrels. Gregg County reported the completion of 14 new wells, of which nine were producers, having a combined initial production of 109,500 barrels. Smith County also became an important factor during March with the completion of one well which was rated at a daily yield of 15,000 barrels. The Van field, in Van Zandt County, also contributed 11 new producers, of 13 completions, in March, with a combined initial production of 55,500 barrels. Thus, the combined East Central Texas area is credited with a total initial crude output for March of 477,150 barrels, or 67 per cent of the total of the United States for that month.

Increased activity in Gray County, Panhandle, Texas, during March resulted in the completion of nine producing wells, of 12 completions, having a total initial output of 7160 barrels. In February, there were seven producers completed with a total initial production of 3130 barrels. Total well completions in the Panhandle in March amounted to 20 wells, of which 11 were producers yielding a total initial output of 7237 barrels, most of which was obtained in Gray County. In the North Texas area, north Young County reported a total initial production from 10 producing wells of 1530 barrels. The total initial for that district

Past Twelve Months

The record for the past 12 months is an interesting study for comparative purposes, the following table giving the field statistics for all states:

Month—	Completions	Producers	Gas wells	Failures	Initial Prod.
January, 1930	1,918	1,142	296	480	685,325
February	1,463	881	201	381	990,869
March	1,544	794	220	530	665,535
April	1,702	1,023	180	499	776,024
May	1,973	1,125	228	611	771,977
June	1,679	950	223	506	580,997
July	2,144	1,167	306	671	845,068
August	1,837	930	310	597	1,160,055
September	1,165	619	208	338	833,109
October	1,199	587	245	367	615,002
November	1,253	644	217	392	901,046
December	1,479	650	310	519	979,111
January, 1931	1,156	519	211	426	796,860
February	815	348	192	275	459,727
March	819	347	153	319	704,526

Note—Rocky Mountain data omitted.

amounted to 1855 barrels in March. While 74 wells were completed in North Texas during March, only 19 were listed as producers. North Young County reported the completion of 46 wells in March, although only 10 yielded oil.

Southwest Texas Initial Small

Duval County and Darst Creek contributed a large part of the new production obtained in Southwest Texas in March. Duval County reported three producing wells, with a total initial of 2600 barrels, while Darst Creek reported three producers with a total initial of 1526 barrels. Total well completions in Southwest Texas during March amounted to 35, of which 12 were producers with a total initial output of 4942 barrels. Coleman County, in West Central Texas, reported the completion of 12 wells in March, of which five were producers, having a combined initial production of 810 barrels. The West Central Texas area reported 29 well completions, nine of which were producers with a total initial of 1115 barrels. West Texas completions during March aggregated 23, of which 14 were producers with a total initial of 3096 barrels. Loving and Crane Counties contributed a combined initial production of 1812 barrels, although the number of producing wells completed only amounted to three.

Barbers Hill, Humble, Pierce Junction and Refugio contributed a greater part of the new production reported in the Texas Gulf Coast during March. These fields reported a combined initial production during the month of 8021 barrels, of a total for the Texas Gulf Coast of 9461 barrels. Total well completions in the Texas Gulf Coast during March amounted to 57, of which 22 were rated as producers.

Oklahoma City continued to furnish the bulk of Oklahoma's new oil production in March, when initial output of 24 wells in that field aggregated 143,625 barrels. The total initial production of the state amounted to 171,185 barrels. Seminole was credited with a total new production for March of 21,630 barrels. Total well completions in Oklahoma amounted to 100, of which 53 were rated as producing wells. Oklahoma City and Seminole are credited with 31 producing wells of the total producers reported for the state. Kansas well completions for March aggregated 44, of which 20 were rated as producing wells. The combined initial oil production amounted to 10,240 barrels. McPherson County was credited with a total initial oil production during March of 6315 barrels from six producing wells completed.

Wildcat operations in Arkansas and North Louisiana accounted for most of the new production obtained in those sections during March. In Arkansas, of a total of 553 barrels of new production for the state, wildcat operations accounted for 300 barrels. All new production obtained in North Louisiana during March was credited to wildcat wells. While 24 wells were completed in North Louisiana in March, only three were brought in as producers, with a total initial of 1292 barrels; all in wildcat territory. The Lockport field in Coastal Louisiana reported the completion of two producing wells with a total initial of 1900 barrels. All fields in the Louisiana Gulf Coast were credited with a total initial oil output of 2463 barrels from eight producing wells.

Playa del Rey, Ventura Avenue and Long Beach contributed the bulk of California's new oil production in March. While California reported the completion of 31 wells, of which 24 were producers, a total of 22 producing wells was credited to the three fields mentioned. New oil production of the state amounted to 11,720 barrels, of which 11,495 barrels was obtained in the aforementioned fields. The Playa del Rey field reported the completion of 12 producing wells, yielding a combined initial production of 5750 barrels.

Field operations in the Eastern States for March were somewhat retarded, compared with February. Total well completions for the Eastern States amounted to 271, against 291 in February. Initial production for 81 producing wells completed in March amounted to 2217 barrels, of which 1366 barrels was contributed by Kentucky. Hart County, Kentucky, reported the completion of 24 wells in March, of which four were rated as producers with a total initial oil production of 950 barrels. Only one producing well was completed in Michigan during March; in Isabella County, being credited with an initial production of 130 barrels. Hinds and Rankin Counties, Mississippi, reports indicated a slowing down of developments, with only two gas well completions having a total initial volume of 60,000,000 cubic feet. Hinds County reported one gas well with an initial volume of 40,000,000 cubic feet, while Rankin County was credited with one well having an initial volume of 20,000,000 cubic feet.

Oklahoma City.—Western Service Corporation has announced that it will start construction of an eight-inch line from the Oklahoma City pool to Guthrie, Oklahoma, where it has been granted a 25-year domestic and industrial franchise. Work on the new line will start as soon as pipe delivery can be made. The company now holds franchises at Tuttle, Minco, Amber, Pocasset, Union City, Wheatland, and Mustang in addition to the one just acquired. State headquarters will be established at Guthrie.

Wichita, Kansas.—George Siedoff of Wichita has started construction on a gas compressor station for Continental Construction Company on its line which will deliver gas from the Texas Panhandle to the Middle West and Great Lakes regions. The new station, which is said to be the largest of its kind ever planned, will be equipped with 12 units of 1250 horsepower each. It is located at Erick, Texas, about 35 miles north of Amarillo.

Houston.—Pure Oil Company's wildcat test at Gueydon dome, South Louisiana, Southwest Louisiana Land Company 1, was abandoned last week in sand and shale at 6594 feet. This test was located 300 feet south and 300 feet west of the northeast corner of Section 4-12s-1w, Vermilion Parish.

Summary of Field Operations, March, 1931

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Recapitulation—United States

	Completions March	Total Completions Jan.-Mar.	Producers March	Total Producers Jan.-Mar.	Gas Wells March	Total Gas Wells Jan.-Mar.	Failures March	Total Failures Jan.-Mar.	Initial Production Oil March	Initial Production Total Oil Jan.-Mar.	Initial Production Gas* March	Initial Production Total Gas* Jan.-Mar.	Total Production March	Total Production Jan.-Mar.
Oklahoma	100	398	53	213	12	54	35	131	171,185	921,645	78¾	588¼	16,612,850	43,862,350
Kansas	44	129	20	58	10	29	14	42	10,240	32,020	113¼	336¾	3,428,550	9,930,250
Texas (Outside Gulf Coast)	265	838	131	381	12	69	122	388	495,395	799,789	383	1,470¾	18,077,650	48,584,300
Gulf Coast	72	244	30	126	1	7	41	111	11,924	62,545	25	185½	5,506,600	16,556,250
North Louisiana	24	89	3	17	4	26	17	46	1,292	10,985	93½	571	1,248,900	3,752,750
Arkansas	11	31	5	15	1	6	5	10	553	878	¼	56¾	1,472,550	4,443,150
Eastern States	271	915	81	284	113	364	77	267	2,217	13,253	319¾	751	3,375,400	9,869,000
New Mexico	1	18	..	12	..	1	1	5	....	40,073	....	31¼	a	a
Rocky Mountains	b	b	b	b	b	b	b	b	b	b	b	b	2,951,000	8,751,450
California	31	128	24	108	..	..	7	20	11,720	79,925	....	....	16,387,100	47,758,000
Total	819	2,790	347	1,214	153	556	319	1,020	704,526	1,961,113	1,013½	3,991¼	69,060,600	193,507,500

*Millions of cubic feet.
(a) Included in Rocky Mountains estimates.
(b) Not available.

EASTERN STATES

NEW YORK

	Completions	Producers	Gas Wells	Failures	Initial Oil	Prod. Gas*	Total Prod.
Allegeny	4	4	..	..	15	..	
Yates	1	..	..	1	..	..	
Total	5	4	..	1	15	..	

PENNSYLVANIA

Allegheny	2	2	..	..	11	..	
Beaver	1	..	..	1	..	..	
Bradford	10	10	..	..	40	..	
Butler	6	2	..	4	4	..	
Center-Middle	3	3	..	..	18	..	
Clarion-Venango	10	7	1	1	25	2	
Greene	4	..	3	1	..	1¼	
Tioga	9	..	7	2	..	196	
Total	45	24	12	9	98	199¼	

SOUTHEASTERN OHIO

Jefferson	1	..	..	1	..	..	
Monroe	5	1	1	3	1	¼	
Morgan	8	1	6	1	2	2¼	
Noble	3	..	3	..	..	1	
Washington	8	5	2	1	16	¾	
Total	25	7	12	6	19	4¼	

CENTRAL OHIO

Ashland	1	..	..	1	..	..	
Athens	9	1	7	1	1	3¼	
Belmont	1	..	1	..	..	¼	
Coshocton	1	..	1	..	..	½	
Fairfield	2	1	1	..	10	¼	
Guernsey	1	..	..	1	..	..	
Hocking	2	1	..	1	5	..	
Lake	1	..	..	1	..	..	
Licking	2	..	2	..	..	½	
Loraine	3	..	1	2	..	1¼	
Medina	8	4	1	3	61	1½	
Muskingum	5	1	3	1	172	6¾	
Perry	4	3	1	..	68	½	
Pickaway	1	..	1	..	..	¼	
Richland	1	..	..	1	..	..	
Stark	2	..	1	1	..	¾	
Summit	1	..	..	1	..	..	
Tuscarawas	1	..	1	..	..	¼	
Wayne	3	..	2	1	..	1¼	
Wayne	3	..	2	1	..	1¼	
Total	49	11	23	15	317	17¼	

NORTHWESTERN OHIO

Crawford	1	..	..	1	..	..	
Hardin	2	..	1	1	..	¼	
Seneca	6	1	5	..	5	1¼	
Wyandot	1	..	1	..	..	½	
Total	10	1	7	2	5	2	
Total Ohio	84	19	42	23	339	23½	

KENTUCKY

	Completions	Producers	Gas Wells	Failures	Initial Oil	Prod. Gas*	Total Prod.
Barren	1	..	1	..	..	½	
Caldwell	2	2	..	..	150	..	
Daviess	2	..	1	1	..	½	
Green	2	2	..	..	50	..	
Hancock	5	5	..	..	171	..	
Hart	**24**	**4**	**9**	**11**	950	6¼	
Henderson	**1**	**1**	..	..	10	..	
Knox	1	..	1	..	..	1	
McLean	6	4	..	2	35	..	
Muhlenberg	**2**	..	..	2	..	..	
Ohio	3	..	1	2	..	¼	
Webster	2	..	2	..	..	1	
Total	51	18	15	18	1366	9½	

INDIANA

Jay	1	1	..	..	3	..	
Knox	1	..	1	..	..	½	
Monroe	1	..	..	1	..	..	
Perry	**3**	**2**	..	**1**	**50**	..	
Pike	2	..	1	1	..	1	
Sullivan	2	..	1	1	..	1	
Vandeberg	1	1	..	..	5	..	
Vigo	2	2	..	..	115	..	
Total	13	6	3	4	178	2½	

ILLINOIS

Crawford	1	..	..	1	..	..	
Monroe	1	..	..	1	..	..	
St. Clair	5	..	..	5	..	..	
Wabash	1	1	..	..	3	..	
Total	8	1	..	7	3	..	

WEST VIRGINIA

Boone	2	..	2	..	..	4¼	
Cabell	4	..	4	..	..	1¼	
Calhoun	11	1	10	..	2	5½	
Clay	1	..	1	..	..	½	
Doddridge	2	..	2	..	..	1	
Fayette	1	..	1	..	..	..	
Harrison	2	1	1	..	2	¼	
Kanawha	8	..	8	..	..	4	
Lewis	1	..	1	..	..	1¼	
Lincoln	4	..	3	1	..	1¼	
Marshall	1	..	1	..	..	¼	
Monogalia	3	2	1	..	20	¼	
Pleasants	1	1	..	..	5	..	
Ritchie	5	2	..	3	55	..	
Roane	1	..	..	1	..	..	
Wayne	2	..	1	1	..	¼	
Wetzel	4	1	2	1	4	3	
Total	53	8	38	7	88	24½	

MISSOURI

St. Louis	1	..	..	1	..	..	
Total	1	..	..	1	..	..	

MISSISSIPPI

	Completions	Producers	Gas Wells	Failures	Oil Initial	Gas* Prod.	Prod. Total
Covington	2	..	..	2	..	..	.....
Hinds	3	..	1	2	..	40	.....
Madison	1	..	..	1	..	..	.....
Rankin	1	..	1	..	..	20	.....
Webster	1	..	..	1	..	..	.....
Total	8	..	2	6	..	60	.....

MICHIGAN

Isabella	2	1	..	1	130	..	.....
Missaukee	1	..	1	..	..	½	.....
Total	3	1	1	1	130	½	.....
Total Eastern States	271	81	113	77	2217	319¾	3,375,400

OKLAHOMA

Allen	..	..	..	..	..	..	415,350
Asher	..	..	..	..	..	..	21,700
Blackwell	..	..	..	..	..	..	89,700
Bowlegs	..	..	..	..	..	..	443,300
Braman	..	..	..	..	..	..	60,450
Bristow-Slick	..	..	..	..	..	..	393,750
Burbank	..	..	..	..	..	..	412,450
Carr City	..	..	..	..	..	..	398,200
Carter	3	3	..	..	2895	..	.....
Comanche	2	..	..	2	..	..	.....
Cotton	1	..	..	1	..	..	.....
Creek	12	5	..	7	740	..	.....
Cromwell	..	..	..	..	..	..	150,350
Cushing	..	..	..	..	..	..	391,100
Davenport	..	..	..	..	..	..	28,750
Duncan	..	..	..	..	..	..	221,450
Earlsboro	..	..	..	..	..	..	631,800
East Earlsboro	..	..	..	..	..	..	567,500
East Little River	..	..	..	..	..	..	279,700
East Seminole	..	..	..	..	..	..	60,650
Fox	..	..	..	..	..	..	31,850
Garber	..	..	..	..	..	..	122,100
Grady	2	..	2	..	..	10½	.....
Graham	..	..	..	..	..	..	93,000
Harmon	1	..	..	1	..	..	.....
Healdton	..	..	..	..	..	..	328,600
Hewitt	..	..	..	..	..	..	188,900
Hubbard	..	..	..	..	..	..	29,300
Hughes	3	..	1	2	..	5½	.....
Jefferson	2	1	..	1	175	..	.....
Kenowa	..	..	..	..	..	..	449,200
Le Flore	1	..	1	..	..	½	.....
Little River	..	..	..	..	..	..	757,350
Logan	..	..	..	..	..	..	124,700
McIntosh	1	..	1	..	..	3	.....
Marshall	1	1	..	..	15	..	.....
Maud	..	..	..	..	..	..	88,800
Mission	..	..	..	..	..	..	222,850
Muskogee	9	2	3	4	13	4¾	.....
North Okmulgee	..	..	..	..	..	..	279,600
Okfuskee	2	1	..	1	40	..	.....
Oklahoma	24	24	..	..	143,625	..	.....
Oklahoma City	..	..	..	..	..	..	4,079,750
Okmulgee	4	..	..	4	..	..	.....
Osage	..	..	..	..	..	..	750,900
Papoose	..	..	..	..	..	..	62,350
Pearson	..	..	..	..	..	..	16,850
Pittsburgh	2	..	2	..	..	34¾	.....
Pontotoc	1	1	..	..	70	..	.....
Pottawatomie	4	3	..	1	2,250	..	.....
St. Louis	..	..	..	..	..	..	750,400
Sasakwa	..	..	..	..	..	..	101,250
Scholem-Alechem	..	..	..	..	..	..	411,650
Scaright	..	..	..	..	..	..	175,750
Seminole County	12	7	..	5	21,630	..	.....
Seminole	..	..	..	..	..	..	475,550
South Earlsboro	..	..	..	..	..	..	210,500
South Okmulgee	..	..	..	..	..	..	162,300
Stephens	10	4	1	5	725	17	.....
Thomas	..	..	..	..	..	..	19,850
Tonkawa	..	..	..	..	..	..	160,000
Tulsa	2	1	1	..	7	2¾	.....
Wagoner	1	..	..	1	..	..	.....
West Asher	..	..	..	..	..	..	233,300
Wewoka	..	..	..	..	..	..	261,650
Yale-Jennings	..	..	..	..	..	..	198,500
Others	..	..	..	..	..	..	1,294,050
Total	100	53	12	35	171,185	78¾	16,612,805

KANSAS

Augusta-Fox-Bush	..	..	..	..	..	..	91,850
Churchill	..	..	..	..	..	..	106,700
Cove	1	..	..	1	..	..	.....
Cowley	2	1	..	1	250	..	.....
El Dorado-Towanda	..	..	..	..	..	..	393,250
Ellis	1	..	..	1	..	..	.....
Florence-Covert	..	..	..	..	..	..	21,350
Greenwood	2	1	..	1	20	..	514,400
Harvey	4	1	..	3	700	..	.....
McPherson	16	6	8	2	6,315	98¼	.....
Marion	1	1	..	..	70	..	.....
Morris	2	..	..	2	..	..	.....
Oxford	..	..	..	..	..	..	70,800
Peabody-Ebling	..	..	..	..	..	..	51,200
Rainbow Bend	..	..	..	..	..	..	45,150
Reno	1	1	..	..	335	..	.....
Russell	3	3	..	..	660	..	97,550
Saline	1	..	..	1	..	..	.....
Sedgwick County	8	6	..	2	1,890	..	.....
Sedgwick	..	..	..	..	..	..	592,750
Stevens	2	..	2	..	..	15	.....
Voshell	..	..	..	..	..	..	590,050
Others	..	..	..	..	..	..	853,500
Total	44	20	10	14	10,240	113¼	3,428,550

CALIFORNIA

	Completions	Producers	Gas Wells	Failures	Oil Initial	Gas* Prod.	Prod. Total
Dominguez	..	..	..	..	..	..	368,700
Elwood-Goleta	..	..	..	..	..	..	1,079,400
Huntington Beach	..	..	..	..	..	..	680,000
Inglewood	..	..	..	..	..	..	475,400
Kettleman Hills	..	..	..	..	..	..	797,400
Long Beach	8	8	..	..	2,145	..	2,802,800
Midway-Sunset	..	..	..	..	..	..	1,628,300
Mt. Poso	1	1	..	..	200	..	.....
Playa Del Rey	12	12	..	..	5,750	..	902,300
Santa Fe Springs	1	1	..	..	25	..	2,238,000
Seal Beach	..	..	..	..	..	..	498,600
Ventura	2	2	..	..	3,600	..	1,397,100
Wildcats	7	..	..	7	..	..	.....
Others	..	..	..	..	..	..	3,501,100
Total	31	24	..	7	11,720	..	16,387,100

ROCKY MOUNTAINS

WYOMING

Big Muddy	..	..	..	..	..	..	61,950
Elk Basin	..	..	..	..	..	..	22,050
Grass Creek	..	..	..	..	..	..	65,750
La Barge	..	..	..	..	..	..	52,100
Lance Creek	..	..	..	..	..	..	6,700
Lost Soldier	..	..	..	..	..	..	97,800
Oregon Basin	..	..	..	..	..	..	45,200
Rock Creek	..	..	..	..	..	..	62,350
Salt Creek	..	..	..	..	..	..	798,700
Others	..	..	..	..	..	..	107,500
Total	..	..	..	..	..	..	1,320,100

MONTANA

Cat Creek	..	..	..	..	..	..	33,250
Pondera	..	..	..	..	..	..	53,400
Sunburst	..	..	..	..	..	..	133,400
Others	..	..	..	..	..	..	44,650
Total	..	..	..	..	..	..	264,700

COLORADO

Florence	..	..	..	..	..	..	12,550
Fort Collins	..	..	..	..	..	..	30,850
Moffats	..	..	..	..	..	..	31,700
Others	..	..	..	..	..	..	55,100
Total	..	..	..	..	..	..	130,200

NEW MEXICO

Artesia	..	..	..	..	..	..	18,450
Eddy	1	..	..	1	..	..	5,850
Hobbs High	..	..	..	..	..	..	962,100
Hogback	..	..	..	..	..	..	13,600
Lea County	..	..	..	..	..	..	200,200
Rattlesnake	..	..	..	..	..	..	32,700
Table Mesa	..	..	..	..	..	..	3,100
Total	1	..	..	1	..	..	1,236,000
Total Mountain States	1	..	..	1	..	..	2,951,000

ARKANSAS

Champagnolle	..	..	..	..	..	..	97,850
El Dorado	..	..	..	..	..	..	117,800
Lisbon	..	..	..	..	..	..	23,950
Nevada	..	..	..	..	..	..	31,000
Smackover-Heavy	..	..	..	..	..	..	999,950
Smackover-Light	..	..	..	..	..	..	134,050
Stephens	..	..	..	..	..	..	26,350
Union	4	4	..	..	253	..	.....
Wildcats	7	1	1	5	300	¼	.....
Others	..	..	..	..	..	..	41,600
Total	11	5	1	5	553	¼	1,472,550

NORTH LOUISIANA

Bossier	2	..	1	1	..	2½	.....
Caddo-Heavy	..	..	..	..	..	..	85,950
Caddo-Light	..	..	..	..	..	..	242,200
Carterville	..	..	..	..	..	..	45,850
Cotton Valley	..	..	..	..	..	..	55,800
DeSoto-Red River	..	..	..	..	..	..	84,050
Haynesville	..	..	..	..	..	..	176,350
Holly	..	..	..	..	..	..	20,000
Homer	..	..	..	..	..	..	104,550
Richland	3	..	2	1	..	84	.....
Urania	..	..	..	..	..	..	142,600
Zwolle	..	..	..	..	..	..	224,850
Wildcats	19	3	1	15	1,292	7	.....
Others	..	..	..	..	..	..	46,700
Total	24	3	4	17	1,292	93½	1,248,900

LOUISIANA GULF COAST

Bayou Bouillon	..	..	..	..	..	..	3,800
Bayou Choctau	1	..	..	1	..	..	.....
Bayou des Glaise	1	..	..	1	..	..	.....
Black Bayou	1	..	..	1	..	..	.....
East Hackberry	..	..	..	..	..	..	67,750
Edgerly	1	1	..	..	500	..	19,700
Evangeline	..	..	..	..	..	..	22,700
Hackberry	..	..	..	..	..	..	23,750
Lake Barre	1	1	..	..	360	..	92,400
Lake Pelto	2	..	..	2	..	..	.....
Lockport	2	2	..	..	1,900	..	151,750
Port Barre	..	..	..	..	..	..	53,550
Sorrento	..	..	..	..	..	..	1,550
St. Martinsville	1	..	..	1	..	..	.....
Starks Dome	1	1	..	..	15	..	.....
Sulphur	1	1	..	..	188	..	51,650
Sweet Lake	..	..	..	..	..	..	34,100
Vinton	3	2	..	1	500	..	195,000
White Castle	..	..	..	..	..	..	31,000
Others	..	..	..	..	..	..	64,100
Total	15	8	..	7	2,463	..	816,800
Total Louisiana	39	11	4	24	3,755	93½	2,065,700

Texas Recapitulation

	Completions	Producers	Gas Wells	Failures	Initial Production Oil	Initial Production Gas*	Total Production
Panhandle	20	11	7	2	7,237	236	1,669,200
South Texas	35	12	2	21	4,942	123	2,204,600
North Texas	74	19	..	55	1,855	...	1,818,750
East Texas	47	45	..	2	297,150	...	.....
East Central Texas	37	21	1	15	180,000	7	4,274,750
West Central Texas	29	9	2	18	1,115	17	784,100
West Texas	23	14	..	9	3,096	...	7,326,250
Total Texas (Outside Gulf Coast)	265	131	12	122	495,395	383	18,077,650
Gulf Coast	57	22	1	34	9,461	25	4,689,800
Total Texas	322	153	13	156	504,856	408	22,767,450

*Millions of cubic feet

TEXAS GULF COAST

	Completions	Producers	Wells Gas	Failures	Oil Initial	Gas* Prod.	Prod. Total
Allen	2	..	..	2	..	..	.....
Barbers Hill	6	4	..	2	3,820	..	625,000
Batson	..	..	..	..	..	..	31,000
Big Creek	..	..	..	..	..	..	88,650
Blue Ridge	..	..	..	..	..	..	36,900
Boling	..	..	..	..	..	..	23,750
Clay Creek	5	4	..	1	545	..	.....
Damon Mound	..	..	..	..	..	..	19,650
Edna	1	..	..	1	..	..	.....
Esperson	2	2	..	..	550	..	77,150
Fannett	..	..	..	..	..	..	16,200
Goose Creek	..	..	..	..	..	..	135,750
Grimes	2	..	..	2	..	..	.....
Hankamer	..	..	..	..	..	..	70,800
Hardin	1	..	..	1	..	..	.....
Hull	..	..	..	..	..	..	190,500
Humble	4	2	..	2	2,050	..	291,300
Lavaca	1	..	..	1	..	..	.....
Madison	1	..	..	1	..	..	.....
Montgomery	2	..	..	2	..	..	.....
Moss Bluff	4	..	..	4	..	..	13,800
Mykawa	1	..	..	1	..	..	.....
North Dayton	..	..	..	..	..	..	21,750
Orange	1	..	..	1	..	..	58,400
Orchard	..	..	..	..	..	..	54,800
Pettus	1	1	..	..	325	..	218,350
Pierce Junction	1	1	..	..	1,080	..	302,100
Port Neches	..	..	..	..	..	..	45,650
Raccoon Bend	10	..	1	9	..	10	248,950
Refugio	8	7	..	1	1,071	15	941,650
Saratoga	1	1	..	..	20	..	29,650
Somerville	..	..	..	..	..	..	69,700
Sour Lake	..	..	..	..	..	..	63,200
South Liberty	..	..	..	..	..	..	75,150
Spindle Top	..	..	..	..	..	..	341,150
Sugar Land	..	..	..	..	..	..	367,550
West Columbia	1	..	..	1	..	..	133,100
Wharton	1	..	..	1	..	..	.....
Wildcats	1	..	..	1	..	..	.....
Others	..	..	..	..	..	..	62,200
Total	57	22	1	34	9,461	25	4,689,800

PANHANDLE TEXAS

	Completions	Producers	Wells Gas	Failures	Oil Initial	Gas* Prod.	Prod. Total
Carson	3	..	3	..	..	108	116,900
Gray	12	9	3	..	7,160	81	1,249,400
Hutchinson	1	1	..	..	2	4	281,700
Moore	1	1	..	..	55	.	.....
Potter	1	..	..	1	..	..	.....
Wheeler	2	..	1	1	..	63	12,600
Others	..	..	..	..	..	..	8,600
Total	20	11	7	2	7,237	236	1,669,200

NORTH TEXAS

	Completions	Producers	Wells Gas	Failures	Oil Initial	Gas* Prod.	Prod. Total
Archer	11	3	..	8	140	..	370,900
Burkburnett	..	..	..	..	..	..	225,150
Collin	1	..	..	1	..	..	.....
Cooke	5	1	..	4	10	..	.....
Electra	..	..	..	..	..	..	274,500
KMA-Iowa Park	..	..	..	..	..	..	125,900
Montague	..	..	..	..	..	..	176,200
North Young	46	10	..	36	1,530	..	279,100
Wichita	9	4	..	5	190	..	.....
Wilbarger	2	1	..	1	15	..	322,000
Others	..	..	..	..	..	..	45,000
Total	74	19	..	55	1,855	..	1,818,750

SOUTH TEXAS

	Completions	Producers	Wells Gas	Failures	Oil Initial	Gas* Prod.	Prod. Total
Bee	3	1	..	2	425	..	.....
Bexar	1	1	..	..	5	..	.....
Chapman	..	..	..	..	..	..	152,700
Dale	..	..	..	..	..	..	7,750
Darst Creek	5	3	..	2	1,625	..	785,750
Duval	4	3	..	1	2,600	..	.....
Goliad	1	1	..	..	60	40	.....
Hays	1	..	..	1	..	..	.....
Jim Hogg	1	..	..	1	..	..	.....
Kinney	1	..	..	1	..	..	.....
Laredo District	..	..	..	..	..	..	439,300
Live Oak	3	..	..	3	..	..	.....
Luling	..	..	..	..	..	..	293,150
Lytton Springs	..	..	..	..	..	..	22,550
Nueces	2	1	..	1	40	35	.....
Salt Flat	..	..	..	..	..	..	446,050
Somerset	..	..	..	..	..	..	40,300
Webb	1	..	..	1	..	..	.....
Zapata	12	2	2	8	187	48	.....
Others	..	..	..	..	..	..	17,050
Total	35	12	2	21	4,942	123	2,204,600

EAST CENTRAL TEXAS

	Completions	Producers	Wells Gas	Failures	Oil Initial	Gas* Prod.	Prod. Total
Boggy Creek	..	..	..	..	..	..	72,350
Corsicana-Powell	..	..	..	..	..	..	149,300
Currie	..	..	..	..	..	..	9,300
Gregg	14	9	..	5	109,500	..	.....
Joiner-Bradford	..	..	..	..	..	..	1,285,250
Kilgore	..	..	..	..	..	..	1,187,650
Longview	..	..	..	..	..	..	360,200
Mexia	..	..	..	..	..	..	114,050
Nigger Creek	..	..	..	..	..	..	4,650
Richland	..	..	..	..	..	..	3,100
Smith	1	1	..	..	15,000	..	.....
Van Zandt	13	11	1	1	55,500	7	1,070,450
Wortham	..	..	..	..	..	..	16,900
Wildcats	9	..	..	9	..	..	.....
Others	..	..	..	..	..	..	1,550
Total	37	21	1	15	180,000	7	4,274,750

EAST TEXAS

	Completions	Producers	Wells Gas	Failures	Oil Initial	Gas* Prod.	Prod. Total
Rusk	47	45	..	2	297,150	..	.....
Total	47	45	..	2	297,150	..	.....

WEST CENTRAL TEXAS

	Completions	Producers	Wells Gas	Failures	Oil Initial	Gas* Prod.	Prod. Total
Brown	6	1	1	4	25	1½	127,100
Callahan	..	..	..	..	..	..	62,000
Coleman	12	5	..	7	810	..	34,100
Eastland	1	..	..	1	..	¼	124,000
Erath	1	..	..	1	..	..	.....
Jack	1	1	..	..	250	3¼	28,400
Palo Pinto	3	1	..	2	15	..	12,400
Shackleford	1	..	..	1	..	..	124,000
Stephens	1	..	..	1	..	..	142,600
Throckmorton	2	..	..	2	..	..	13,100
South Young	1	1	..	..	15	12	79,200
Others	..	..	..	..	..	..	37,200
Total	29	9	2	18	1,115	17	784,100

WEST TEXAS

	Completions	Producers	Wells Gas	Failures	Oil Initial	Gas* Prod.	Prod. Total
Crane	2	1	..	1	522	..	754,950
Crockett	..	..	..	..	..	..	55,800
Ector	..	..	..	..	..	..	194,600
Howard	..	..	..	..	..	..	734,250
Irion	1	1	..	..	15	..	.....
Jones	..	..	..	..	..	..	37,200
Loving	3	2	..	1	1,290	..	.....
Mitchell-Scurry	..	..	..	..	..	..	59,100
Pecos	5	4	..	1	590	..	112,700
Reagan	..	..	..	..	..	..	849,050
Upton	1	1	..	..	310	..	.....
Ward	3	3	..	..	305	..	.....
Winkler	2	2	..	..	64	..	1,480,600
Yates	..	..	..	..	..	..	2,814,050
Wildcats	6	..	..	6	..	..	.....
Others	..	..	..	..	..	..	224,950
Total	23	14	..	9	3,096	..	7,326,250

Completions for Past Week in U. S. Fields

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For Tabulation and Comparison See Market Section

CALIFORNIA

Company, Well and Location	Initial Production Bbls.	Depth
LONG BEACH—		
Tom Cannon, Hall-Weber 5	200	5075
MARICOPA FLAT—		
Lakeview Oil & Refining Co., P. W. 44	300	4177
PLAYA DEL REY—		
Langford Oil Co., No. 1	200	6115
George Wolfe, No. 5	375	5810
SANTA FE SPRINGS—		
Union Oil Co., Bell 39	250	5355
Bell 35	950	6580

KANSAS

Company, Well and Location	Initial Production Bbls.	Depth
GREENWOOD COUNTY—		
Simmons et al, Winegar 4, nw c sw 27-23-11e	80	1901
McPHERSON COUNTY—		
McPherson O&G Dev. Co. and Shell, Ostlind 1, c sw nw 12-19-2w	¶45	2900
RUSSELL COUNTY—		
Signal O&G and Mid-Kansas, Bary 1, nw sw sw 27-15-13w	*	3438
STEVENS COUNTY—		
Texas Interstate Pipe Line and Stevens O&G, Costly 1, c ne 32-33-38w	¶5	2565
Texas Interstate Pipe Line and Phillips, Patterson 1, c nw 28-33-37	¶7¾	2610
Trees Oil Co., Meyer 1, c se 27-34-39w	¶14	2591

OKLAHOMA

Company, Well and Location	Initial Production Bbls.	Depth
CARTER COUNTY—		
Tex-Okla. Drlg. Co., Anderson 1, se ne se 32-4s-2e	*	2806
Magnolia Pet. Co., McCrory 1, se c 10-1s-3w	*	4241
CREEK COUNTY—		
C. Mechling et al, Coonrod 1, se c 18-19-9e	*	2525
Murta, Sherry and Carter Oil Co., Wilson 3, nw c se nw 32-17-12e	¶6½	1585
Krasne Drlg. Co., Harry 2, se sw se 4-17-11e	5	1662
Gled Oil Co. et al, Hamilton 1, nw ne ne 29-19-9e	440	2114
E. L. Robinson, Bucker 2, sw c nw sw nw 21-19-9e	50	2173
GRADY COUNTY—		
Badgett and Cooper, Williams 1, c sw 24-4n-8w	¶39	1909
HUGHES COUNTY—		
Magnolia Pet. Co., Hayes 2, nw sw nw 16-7-8e	¶15	2995
LINCOLN COUNTY—		
H. D. Truex et al, Wolfe 1, nec nw 12-15-6e	¶21 30	3647
OKLAHOMA COUNTY—		
I.T.I.O., Ferndale Community 6, nw se ne 11-11-3w	310	6225
Phillips Pet. Co., Robb 1, cel sw ne sw 10-11-3w	2550	6465
Phillips Pet. Co., Mosey 1, cel ne se nw 3-11-3w	5485	6305
California Operating Co., Stout 1, ne c nw se nw 2-11-3w	6655	6185
OKMULGEE COUNTY—		
C. D. Klingensmith, Farr 3, c e½ se nw 35-16-11e	45	1806
PAYNE COUNTY—		
Deep Rock Oil Corp., Little Chief 1, (owd) nw c ne 4-18-5e	140	2375
Wood Oil Co., Curley Chief 1, sw c se 33-19-5e	150	2390
PITTSBURG COUNTY—		
Central States Light & Power, Carney 1, nw c ne 9-7-18e	¶18	1667
POTTAWATOMIE COUNTY—		
Mid-Continent Pet. Corp., Archer 2, se sw se 14-6-3e	1340	3522
SEMINOLE COUNTY—		
Carter Oil Co., Campbell 3, nw ne sw 20-9-6e	¶30	2550
TULSA COUNTY—		
McDonald et al, Wolfe 1, (owd) se c ne 24-16-13e	30	1650
Preston et al, Perryman 2, cel nw nw 4-17-14e	5	1487
Ownes et al, Hailey 4, se c nw sw 33-18-14e	20	1485
Murphy et al, McIntosh 1a, nw c 28-19-14e	*	1335

EASTERN STATES

PENNSYLVANIA

Company, Well and Location	Initial Production Bbls.	Depth
BEAVER COUNTY—		
J. L. Abrams, C. Young 2	2	....
BUTLER COUNTY—		
McNanny & Co., Wilson 1	¶¼	....
GREENE COUNTY—		
Philadelphia Natural Gas Co., Stevens 2	¶¼	3413
WASHINGTON COUNTY—		
W. B. Redd & Co., Crile 1	¶¼	2712

NEW YORK

Company, Well and Location	Initial Production Bbls.	Depth
ERIE COUNTY—		
Iroquois Gas Co., French 1	¶½	2775
Iroquois Gas Co., Unknown 1	¶½	2855
STEUBEN COUNTY—		
Paul Benedum, Perkins 2	*	....
Lamoka Power Co., Fee 1	¶9	1757
YATES COUNTY—		
Bradford Supply Co., Hall 1	*	....

WEST VIRGINIA

Company, Well and Location	Initial Production Bbls.	Depth
BOONE COUNTY—		
Godfrey L. Cabot Inc., Federal Coal Co. 32	¶¼	3484
CLAY COUNTY—		
The Pure Oil o., Horan & Co. 4	¶¼	2550
DODDRIDGE COUNTY—		
J. H. Pentz, Underwood 4	1	2740
Claud Maxwell, Underwood 1	5	2661
FAYETTE COUNTY—		
Godfrey L. Cabot Inc., Huddleston 1	*	....
GILMER COUNTY—		
Hope Natural Gas Co., Bennett 6063	¶¼	....
L. C. Waggoner & Co., Radabaugh 1	¶¼	1892
Gilco Oil & Gas Co., Woofter 1	¶½	2104
LINCOLN COUNTY—		
Conley Gas Co., Adkins 3	¶¼	2404
KANAWHA COUNTY—		
United Fuel Gas Co., Sunday Creek Coal Co. 4277	¶½	2443
MARSHALL COUNTY—		
G. B. Patterson, Chase Hrs. 1	¶1½	3022
MONONGALIA COUNTY—		
Pittsburg & West Virginia Nat. Gas Co., Kinney Hrs. 5295	¶1¼	3503
WETZEL COUNTY—		
Manufacturers Light & Heat Co., Byard 3468	¶½	1987

KENTUCKY

Company, Well and Location	Initial Production Bbls.	Depth
HANCOCK COUNTY—		
Chester Oil Co., Bates 4	100	140
LEE COUNTY—		
James G. Cooper, Day 5	2	....
MUHLENBERG COUNTY—		
Ellis & Young, Lee 2	35	800
METCALF COUNTY—		
Unknown, Lowe 1	¶½	....
McLEAN COUNTY—		
Louisville Gas & Electric Co., Island 1	30	....
Ballantine, Bryan & Co., Caroway 1	*	1238
The Ohio Oil Co., McManama 4	*	....

SOUTHEASTERN OHIO

Company, Well and Location	Initial Production Bbls.	Depth
WASHINGTON COUNTY—		
John Wagner, Wagner 3	3	730
NOBLE COUNTY—		
Local Oil Co., Dimmerling 4	*	677
JEFFERSON COUNTY—		
Peters & Co., Clark 1	*	1400

CENTRAL OHIO

Company, Well and Location	Initial Production Bbls.	Depth
ATHENS COUNTY—		
J. J. Walters & Co., Nelsonville Foundry 1	¶1½	3302
BELMONT COUNTY—		
M. W. Fulton & Co., Slevin 4	¶¼	1978
LORAIN COUNTY—		
McMillan & Co., Allen 3	¶5	2698
LICKING COUNTY—		
The Pure Oil Co., Priest 8	37	2834
MEDINA COUNTY—		
Edson Sons Co., Frank 16	30	477
MUSKINGUM COUNTY—		
Fritz Oil & Gas Co., Pletcher 1	¶¼	4183
PERRY COUNTY—		
Mid-East Oil & Gas Co., Brown 2	¶½ 30	3114
Perry Sturm & Co., McNulty 1	*	3061
HOCKING COUNTY—		
Era Oil & Gas Co., Campbell 1	3	3140

NORTHWESTERN OHIO

Company, Well and Location	Initial Production Bbls.	Depth
SENECA COUNTY—		
Sandusky Gas Co., Wright 3	¶¼	....
Sandusky Gas Co., Miller 3	¶¼	....
Sandusky Gas Co., Schlachter-Fleck 4	¶¼	....
Sandusky Gas Co., Doran 1	¶¼	....
Sandusky Gas Co., Betts Estate 1	¶¼	....

INDIANA

Company, Well and Location	Initial Production Bbls.	Depth
MONROE COUNTY—		
The Ohio Oil Co., Barrow 1	*	876

ILLINOIS

Company, Well and Location	Initial Production Bbls.	Depth
CRAWFORD COUNTY—		
W. C. McBride Inc., Magill 4	25	....

MICHIGAN

Company, Well and Location	Initial Production Bbls.	Depth
ISABELLA COUNTY—		
Gibson-Johnson-Borden Inc., McGuire 1	¶2¼	1304

MISSISSIPPI

Company, Well and Location	Initial Production Bbls.	Depth
HINDS COUNTY, (Jackson)—		
Love et al, Payne 1, 27-6-1e	*	2544

NORTH LOUISIANA

Company, Well and Location	Initial Production Bbls.	Depth
CADDO PARISH—		
Falcon Oil Co., Nunelly 5, 29-20-15	50	2360
DESOTO PARISH, (Naborton)—		
Ernest Nickelson, J. M. Nabors 1, 32-13-11	40	1310
RICHLAND PARISH—		
United Carbon Co., Lindow 1, 15-16-6e	¶37½	2440

ARKANSAS

Company, Well and Location	Initial Production Bbls.	Depth
UNION COUNTY, (Smackover)—		
Lion O. R. Co., G. E. Murphy C-11 8-16-15 (sec. comp)	4	2310

LOUISIANA GULF COAST

Company, Well and Location	Initial Production Bbls.	Depth
BLACK BAYOU—		
Shell Pet. Corp., Watkins 16	500	4519
GUEYDON—		
Pure Oil Co., S. W. La. Land Co. 1	*	6594
JEFFERSON ISLAND—		
Jefferson Lake Oil Co., Lake Peigneur 10	*	2270
LAKE GRANDE ECAILLE—		
Humble-Gulf-Shell, Cockrell-Moran 2	*	5861
ROSE DOME—		
Gulf Ref. Co., Buras Levee Board 2-B	*	2460
VERMILION BAY—		
The Texas Co., Vermilion Bay 6	*	5868
JEFFERSON DAVIS—		
H. T. McClain et al, Trumbell Atterbury 1	*	6075

NEW MEXICO

Company, Well and Location	Initial Production Bbls.	Depth
LEA COUNTY—		
Gypsy Oil Co., Grimes 7	¶4½-5190	4005

(Continued on page 86)

Permits Granted For New Wells

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TEXAS

ARCHER COUNTY—Dr. Chas. Wm. Wallace, Wichita Falls, Fee, 167, 30, S 1, S. P. Ry. sur, 1202 ft from n and 1821 ft from w line. Deep Oil Dev. Co., Wichita Falls, L. F. Wilson, 58, 1, B 75 Amer. Trib. sur, 330 ft from s and e lines. F. P. Hynes et al, Wichita Falls, J. T. Richardson, 33, 3, S 21, J. Scott sur, south central part of lease.

BEXAR COUNTY—Ingersoll & Miller, San Antonio, E. B. Carruth, 607, 1, center. Swearingen Oil Co., San Antonio, A .J. Swearingen, 100, 9, No. 52 sur, 300 ft w of No. 8.

COLEMAN COUNTY — Canyon O&G Co., Cross Plains, E. L. Harris, 5, 2, B 18, Burkett sur, 150 ft from n and 128 ft from e line. A. L. Matlock et al, Coleman, W. P. Fletcher, 129, 1, Wm. Farris sur, 1050 ft from w and 150 ft from s line. Burtell & Dozier, Santa Anna, L. D. Rendleman, 419, 2, No. 151 Martinez sur, 250 ft from n and e lines. Vernon O&G Co., Blackwell, Okla., L. Tweedle, 207, 1, No. 628, S. B. Nixon sur, 990 ft from e and 330 ft from s line.

CHAMBERS COUNTY—Sinclair O&G Co., Houston, Smith, 30, 3, W. D. Smith sur, 50 ft from s and e lines.

CHEROKEE COUNTY—Sinclair O&G Co., Fort Worth, C. T. Martin, 128, 1, L. Baker sur, 300 ft from n and 600 ft from w line.

DUVAL COUNTY—Breeding, Frasher et al, San Antonio, Bishop, 160, 2, S 135, GB&CNG sur, nw cor of ne¼ of sw¼.

EASTLAND COUNTY — Prairie O&G Co., Ranger, W. H. Rich, 1, S 10, H&TC sur, 450 ft from s and w lines.

FISHER COUNTY — Stanolind O&G Co., Wichita Falls, J. J. Steele, 80, 2, S 210, B 1, BBB&C sur, 1210 ft from w and 330 ft from s line sw¼.

FORT BEND COUNTY—Doney & Means, Houston, Blakely, 10, 1, Blk E. E. Drew sur, 50 ft from s and 150 ft from w line lot 8.

GREGG COUNTY—Shell Pet. Corp., Dallas, J. B. Watson, 100, 1, J. S. Caruthers sur, 150 ft from e and 200 from s line. Hunter & Rowe, Dallas, J. B. Watson, 10, 1, M. Van Winkle sur, 160 ft from s and w lines. Mullendore & Berry, Stillwater, Okla., M. Magrill, 22, 1, D. Sanchez sur, 291 ft from n and 410 ft from e line. Rose Oil Corp., Fort Worth, J. A. Knowle, 100, 1, Wm. Lyle sur, center. Texas Unity Oil Co., I-GN, 2, 1, J. Caruthers sur, ne corner; 2, 760 ft sw of No. 1; 3, 360 ft sw of No. 2; 4, 400 ft sw of No. 3. Skipper-Lacy Oil Co., Longview, M. Magrill, 12, 1, D. Sanchez sur, 450 ft from e and 200 ft from s line. Stanolind O&G Co., Tulsa, B. Wood, 116, 1, I. G. Skillern sur, 200 ft from n and e lines. Magnolia Pet. Co., Dallas, B. E. Rodden, 42, 5, Wm. Robinson sur, 300 ft s of No. 1. Tidal Oil Co., Fort Worth, N. Bean, 58, 1, I. Ruddle sur, 200 ft from n and 250 ft from w line. Mattylee Eslick et al, Longview, Spring Hill Ch., 15, 1, D. Sanchez sur, 150 ft from s and w lines. W. R. Nicholson, 25, 1, M. Mann sur, 150 ft from s and e lines. C. L. Mahaney, Dallas, Calvary Ch., 4, 1, M. Van Winkle sur, 157 ft from w and 210 ft from s line. Longview-Marshall Oil Co., Marshall, W. M. Lamb, 12, 1, D. Ferguson sur, 150 ft from n and w lines.

GUADALUPE COUNTY—Humble O&R Co., Houston, L. G. Denman, A, 300, 24, A. S. Emmett sur, 5448 ft se of No. 3.

HOWARD COUNTY — Magnolia Pet. Co., Dallas, S. Hyman, 320, 6, S 113, B 29, W&NW sur, 330 ft from s and w lines. McGinley Corp., Fort Worth, S. M. Hyman, 480, 1, S 89, B 29, W&NW sur, 231 ft from s and w lines of sec.

HARDIN COUNTY—East Batson Oil Co., Batson, Gulf, 1/3, 1, J. Knight sur, 39 ft from e and 41 ft from s line.

HARRISON COUNTY—Ben Banner, Fort Worth, J. C. Lowry, 81, 1, W. W. O. Standfield sur, 1087 ft from n and 835 ft from w line.

HOUSTON COUNTY — A. E. Winfree, Crockett, R. F. Hodges, 50, 1, R. R. Russell sur, 1500 ft from w and 185 ft from w line.

For Tabulation and Comparison See Market Section

IRION COUNTY—W. F. Brazleton et al, Olney, J. M. Nutt, 40, 1, S 6, GCSL sur, 150 ft from s and w lines of se¼ of sw¼.

JONES COUNTY—Young & McNeill et al, Abilene, L. R. Cade, 70, 1, S 12, B 19, T&P sur, 150 ft from s and 450 ft from w line.

JIM HOGG COUNTY—W. P. Thompson, Laredo, C. Palacios, 40, 1, S 231, B 14, E. Scott sur, 2190 ft from e and 1170 ft from s line sec.

MORRIS COUNTY — Holmes, Nelson & Flynn, Longview, Connor, 704, 1, J. V. Cherry sur, 1500 vs s of center of n line.

NACADOCHES COUNTY—Joiner Oil Corp., Dallas, A. Legg, 40, 1, J. Durst sur, 160 ft from n and w lines. Darwin Benedum, San Antonio, J. H. Conkrite, 100, 1, J. A. Chireno sur, 340 ft from n and 336 ft from w line.

NUECES COUNTY—Saxet Oil Co., Houston, J. Dunn, 378, 7, se corner.

PANOLA COUNTY — J. S. Dean, Shreveport, T. Douglas, 200, 2, J. Yarnell sur, 204 ft e of center of w line.

PALO PINTO COUNTY—Brazos River Gas Co., Mineral Walls, E. B. Edmondson, 961, 15, B A49 D. Bourne sur, ne corner.

RUSK COUNTY—Gulf Prod. Co., Houston, R. N. Brightwell, 50, 2, R. E. Winn sur, 330 ft from n and e lines. M. E. Peterson, 92, 3, I. Ruddle sur, 155 ft w of center of e line. Humble O&R Co., Houston, L. D. Crim, 628, 14, E. G. Sevier sur, 158 ft from e and 1207 ft from s line; 15, 210 ft from e and 661 ft from s line. M. Kangera, 90, 3, M. J. Pru sur, 150 ft from s and e lines. C. P. Oil Co., Henderson, Giles, 62, 1, M. J. Pru sur, 200 ft from s and e lines. Thrash, 19, 1, M. J. Pru sur, 200 ft from n and w lines. W. B. Hamilton et al, Wichita Falls, Wm. Jobe, 109, 6, J. Kiminez sur, 150 ft from n and w lines. Magnolia Pet. Co., Dallas, C. C. Still, 100, 1, M. McCabe sur, 160 ft from n and e lines. B. T. Head, Jr., et al, Dallas, J. Ector, 50, 1, D. Clark sur, 750 ft from n and e lines. W. D. Walton et al, Henderson, W. P. Brightwell, 20, 1, R. E. Winn sur, 162 ft from n and 155 ft from e line. Gulf Prod. Co., Houston, W. A. Hindman, 21, 1, J. G. Snow sur, 330 ft w of center of e line. Texas Unity Oil Co., Houston, I-GN, 1, J. Caruthers sur, south corner; 2, 528 ft ne of No. 1; 3, 528 ft ne of No. 2; 4, 528 ft ne of No. 3. Stanolind O&G Co., Tulsa, B. Laird, 40, 3, I. Rubble sur, 588 ft s of No. 2; 4, 512 ft s of No. 1. A. J. Clark, Tyler, A. Givens, 3, 1, R. W. Smith sur, 260 ft from e and 50 ft from s line. Alfred McMillan, Henderson, A. D. Blackwell, 42, 1, M. J. Pru sur, 214 ft from n and 150 ft from e line. F. W. Roe, Tyler, B. F. Maxwell, 23, 1, R. H. Penney sur, 233 ft from s and w lines. Moody-Seagraves Prod. Co., San Antonio, A. J. Deason, 2½, 1, M. J. Pru sur, ne corner. L. Toliver, 16, 2, J. Ximinez sur, 150 ft from w and 383 ft from s line. Sun Oil Co., Dallas, J. R. Beall, 180, 1, W. P. Chisum sur, 200 ft from s and w lines. E. S. Barker, 77, 1, A. M. Ryan sur, 200 ft from e and 165 ft from s line. Houston Oil Co. & Jones, Houston, D. M. Peterson, 10, A2, I. Ruddle sur, 150 ft from s and e lines. Phillips Oil Operators, Tyler, J. B. Wilson, 10, 1, M. J. Pru sur, 150 ft from s and e lines. C. S. McLaughlin, Fort Worth, Deason, 10, 1, J. Ximinez sur, 150 ft from n and e lines. Sun Oil Co., Dallas, S. A. Selman, 67, 1, M. J. Pru sur, 150 from n and e lines. K. & P. Oil Co., Tyler, M. Brock, 12, 1, R. W. Smith sur, 150 ft from n and 468 ft from e line. E. B. Alford, 9, 1, I. G. Parker sur, 196 ft from n and 150 ft from w line. Consolidated Oil Co., Wichita Falls, W. M. Camp, 7½, B1, W. M. Camp sur, 200 ft from n and 154 ft from w line. Shell Pet. Corp., Dallas, D. Wills, 112, 1, Wm. Chisum sur, 312 ft from n and 180 ft from w line. Warlick, Yeager et al, Dallas, J. R. Brightwell, 15, 1, R. W. Smith sur, 150 ft from n and w lines.

REAL COUNTY—Eastland Oil Co. & Kilgore, Fort Worth, D. Auld, 13, 1, S 23, CCSD-&RGNG sur, 150 ft from s and w lines.

SMITH COUNTY—A. W. Phillips, Tyler, M. T. Cole, 40, 1, SF 13093 sur, 150 ft from s and w lines. Sinclair O&G Co., Fort Worth, W. B. Jarvis, 267, 1, J. Vargas sur, 211 ft from s and 161 ft from w line.

SAN PATRICIO COUNTY—Saxet Oil Co., Houston, 356, 4, Bell & Seguin sur, south central part of lease. J. Dunn, 378, 7, se corner.

STEPHENS COUNTY—Sun Oil Co., Dallas, C. Kendrick, 320, 4, 1175, TE&L sur, 150 ft from n and 1422 ft from e line.

TRAVIS COUNTY—Jas. T. Cumley, Wichita Falls, M. Ehrlich, 78, 1, E. Caples sur, 150 ft from se and 868 ft from sw line.

UPSHER COUNTY—Mudge Oil Co., Tyler, J. D. Richardson, 92, 1, D. Ferguson sur, 150 ft from s and e lines.

VAN ZANDT COUNTY — Pure Oil Co., Fort Worth, J. A. Bracken, 69, 3, J. Walling sur, 250 ft from s and e lines; F. B. Smith, 80, 5, J. Walling sur, 250 ft from n and 660 ft from e line.

WASHINGTON COUNTY — Sun Oil Co., Houston, W. Janner, 169, 5, J. F. Perry sur, 1200 ft from sw and 1170 ft from se line; W. F. Schlottman, 86, 3, J. F. Perry sur, 300 ft from ne and 1522 ft from se line.

WICHITA COUNTY — Embury Dev. Co., Fort Worth, E. E. Gaatze, 41, 6, S 2, GC&SF sur, 500 ft from w and 200 ft from s line. Consolidated Oil Co., Wichita Falls, Munger, 236, 1, B 31, W.V.F.L. sur, 1431 ft from w and 1750 ft from s line. Beard & Hammond, Wichita Falls, Kemp-Kempner, 146, 1, B 13, W.V.F.L. sur, 150 ft from n and e lines.

WILBARGER COUNTY—Queen Oil Co., Wichita Falls, Harrold, 267, 16, S 25, B 13, H&TC sur, 180 ft from s and 1835 ft from w line.

WEBB COUNTY—O. W. Killam, Laredo, J. Cuellar, 877, 3, J. Cuellar sur No. 4, 2520 ft from sw and 2240 ft from se line; 4, 2820 ft from ne and 1256 ft from se line; 2, 3000 ft from se and 1580 ft from sw line; S. N. Johnson, 640, 1, No. 1617, 1120 ft from n and 1180 ft from w line. South Texas Prod. Co., Houston, Benavides, 2, Blk. 320, M. Arispe sur, center of Blk. 320.

YOUNG COUNTY—Terrell & Willis, Newcastle, Belknap, 40, 1, 11, TE&L sur, 450 ft from n and 150 ft from w line. J. F. West, Olney, C. E. Miles, 80, 1, 63, TE&L sur, 150 ft from n and e lines. A. H. Stolz, El Dorado, Ark., Baldwin, 40, 2, 20, TE&L sur, 450 ft from n and e lines. Texas Co., Wichita Falls, J. K. Jeffrey, B, 60, 5, 42, TE&L sur, 450 ft from s and e lines. King Royalty Co., Wichita Falls, J. F. Larimore, 160, 20, 2246, TE&L sur, 750 ft from e and 466 ft from n line; 21, 1050 ft from e and 466 ft from n line. Putnam Oil Co., Cisco, C. J. Taack, 80, 1, 264, TE&L sur, 1260 ft from n and 801 ft from e line. Stacy Jenkins, Burkburnett, J. T. Lowe, 80, 1, 59, TE&L sur, 450 ft from s and 150 ft from e line. R. J. Watson, Newcastle, A. C. Watson, 40, 1, 249, TE&L sur, 650 ft from e and 1800 ft from s line. H. B. Sparks, Olney, R. Campbell, 40, 1-A, 1389, TE&L sur, 300 ft n of No. 2. Arcadia Refg. Co., Coleman, Jeffery, 40, 1, 47, TE&L sur, 150 ft from s and e lines. E. C. Reed, Graham, E. P. Tatum, 105, 2, 1908, TE&L sur, 760 ft from n and 899 ft from e line Sec. McClung & Dawson, Cisco, J. Price, 80, 1, 257, TE&L sur, 875 ft from n and 450 ft from e line. L. M. Ray, Graham, E. M. Eddleman, 148, 1, Wm. Byerly sur, 600 ft from n and 750 ft from e line. Texas Co., Wichita Falls, E. A. Jennings, 134, 1, J. C. Smith sur, 1050 ft from n and 450 ft from w line. Jack Anthony, Breckenridge, C. C. Robertson, 120, 1, 1649, TE&L sur.

ZAPATA COUNTY—O. W. Killam, Laredo, R. Cuellar, 363, 39C, No. 278, 455 ft from n and 1200 ft from sw line; A. Bustamente, 40, 4, No. 5 Comitas sur, 450 ft from ne and 200

ft from se line Blk. 6; Fee 640, 3, No. 182, 1330 ft from nw and 1950 ft from ne line; 4, 1460 ft from ne and 2330 ft from se line; E. Cuellar, 431, 41B, No. 277, 150 ft from n and 1210 ft from sw line; 42B, 600 ft from sw and 710 ft from s line; A. Bustamente, 40, 5, No. 5 Comitas sur, 150 ft from nw and 797 ft from ne line Blk. 7.

KANSAS

BUTLER COUNTY — Magnolia Pet. Co., Koogler 65, se sw nw 21-26-5e.

GREENWOOD COUNTY—Phillips Pet. and Gore, Edwards 1, ne se ne 35-24-10e.

McPHERSON COUNTY — Graham Bros., Rolander 1a ,owd), se sw sw 30-18-2w. Graham Bros. et al, Rolander 2, sw nw sw 30-18-2w.

MORRIS COUNTY—Loomis et al, Munsell 1, c sw se 15-16-7e.

STEVENS COUNTY — Argus Prod. Co., Greenwood 1, c ne 11-34-38w.

OKLAHOMA

CARTER COUNTY—Louis Sikes, Hopson 1, ne nw ne 25-1s-3w.

COTTON COUNTY — Colbert and Robert Cole, Thomas 1, se c nw sw 28-2s-11w.

CREEK COUNTY—L. A. Carpenter et al, Thompson 1, se c nw sw 22-17-11e. Trout et al, Grayson 2, sw c nw ne 1-19-10e. Holmes et al, Bruner 2, se c nw sw 3-19-9e. Curtis and Tulsa Oil Co., Purcell 1A, csl n½ nw ne 22-19-9e.

HASKELL COUNTY—Finefield et al, Block 50, Kinta Townsite, 6-7-20e.

LINCOLN COUNTY — Mid-Continent Pet. Corp. et al, Lillis 1, ne c se 9-13-6e.

MUSKOGEE COUNTY—Braman Oil Co., Jackson 4, cnl sw nw 17-13-16e. H. L. Jolly, Spaulding 2, ne c se se ne 8-15-18e.

OKLAHOMA COUNTY—Westgate Oil Co., Carey 4, sw nw se 34-12-3w. Westgate Oil Co., Carey 3, sw c se nw se 34-12-3w. Denver Prod. & Refg. Co., Glendale 1, cwl ne sw nw 3-11-3w. Champlin O&R et al, Lot 1, ne c sw nw se 3-11-3w. Stauffer et al, weinig 1, sw c ne nw se 15-11-3w.

OKMULGEE COUNTY — Iverson et al, Rentie 1, cnl ne sw 14-14-12e.

TULSA COUNTY—J. H. Wright Estate, McKellop 1a (owd), se c ne sw 23-17-10e. Dunn et al, Flippen 1 (owd), ne c sw se 28-19-11e. Chambler and Day, Shields 1, se c 20-14-14e. Galf-Brown, McKay 1, se c nw sw 32-19-11e.

WAGONER COUNTY—Barth et al, McIntosh 1, nw c sw se 22-18-15e.

LOUISIANA

CADDO PARISH — Pelican Nat. Gas Co., Shreveport, La., Cooper 1, 29-18n-14w, 1810 ft e and 1064 ft s of nw cor of sec.

CONCORDIA PARISH—United Gas Public Service Co., Houston, Windemere 1, 33-8n-9e, 6461 ft s 41° e 26½ ft s 49° w of nw cor of sec.

SABINE PARISH — H. H. Alvord, Jr., Shreveport, Sabine Lbr. Co. 1, 1-7n-12w, 330 ft n and 165 ft e of sw cor sw¼ of ne¼. Sabine Lbr. Co. 1-7n-12w, 1100 ft e and 175 ft s of nw cor sw¼ of ne¼. H. W. Perritt, Shreveport, La., W. T. Boring 1, 11-8n-12w, 330 ft e and 330 ft s of nw cor of sec. Sabine Royalty Co., Shreveport, La., Bill Hill 1, 5-8n-11w, 200 ft e and 400 ft s of nw cor ne¼ of ne¼.

CALIFORNIA

KETTLEMAN HILLS—Milham Exploration Co., No. 25, 28-21-17.

LONG BEACH—D. P. T. Pet. Co., No. 1, 18-4-12.

LOS ANGELES COUNTY—Lyle W. Rucker, No. 1, 26-1-17.

ORANGE COUNTY—Gieck Oil Corp., Wilson 1, 20-5-11.

RICHFIELD—E. C. Johnson and John F. Dietzel, Irwin 1, 32-3-9.

SANTA FE SPRINGS—Union Oil Co., Bell 62, 6-3-11.

▼ COMPLETIONS ▼

(*Continued from page 84*)

TEXAS

EAST TEXAS

GREGG COUNTY—

Arkansas Fuel Oil Co.-Yount Lee Oil Co., Lathrop 2-A	15,000		3613
D. H. Byrd-Gulf Prod. Co., Frank Elder 1		*	4012
Harry W. Elliott et al, S. G. Andrews 1	15,000		3650
Mrs. Mamie Hammond et al, J. M. Hamby 1		*	3728
Magnolia Pet. Co., B. E. Rodden 2	12,000		3603
Shell Pet. Corp., J. D. Davis 1	7500		3630
Simms Oil Co.-Stanolind O&G Co., B. G. Tenery 1	12,000		3580
Ben Youngblood et al, Wm. Lamb 1		*	3619

RUSK COUNTY—

Ball Oil Corp. & Malone, Bradford 2	2000		3685
Nick Barbare (Universal Oil, Gas & Mining Co.), Brown 1	1950		3691
H. L. Balckstock et al, W. P. Brightwell 1	10,000		3684
W. P. Brightwell 2	7500		3720
Clark & Cowden, Mercer 1		*	3595
Consolidated Oil Co.-Primrose Pet. Co., Camp (7½-ac) 1	2500		3699
W. H. Dunning & J. H. Markham, Jr., J. N. Peterson 1	15,000		3726
J. N. Peterson 2	15,000		3698
Elzey Drilling Co. & C. H. Tautenhahn, W. M. Camp 1	500		3627
Federated Oil Co., Camp (15-ac) 1	3000		3675
Frank Foster-Deep Rock Oil Co. et al, Ashby 3	1700		3679
Mayfield-Alford 2	425		3685
Foster-Chas. F. Kolp & M. G. Jeffries, M. Alford 2	1200		3615
Foster-Little et al, Mayfield-Alford 1	1000		3690
Fox-Butler-Heflin, A. Thrash 2	1450		3695
W. B. Hamilton-Consolidated Oil Jenkins et al, Wm. Jobe 2	2500		3697
Wm. Jobe 5	150		3640
Haynes Drilling Co., J. T. Brown 3	3000		3690
Heep Oil Corp., Bean 1	8000		3676
Humble O&R Co., L. D. Crim 8	12,000		3694
L. D. Crim 7	5000		3682
S. S. Laird 2-A	12,000		3710
E. M. Jones-Houston Oil Co., Peterson 1-A	15,000		3771
C. M. Joiner et al, Bradford 2-B	1500		3670
Bradford 3-B	1000		3730
Leonard Pet. Co., Adams 1		*	3334
Magnolia Pet. Co., Della Crim 5	18,000		3657
Karona Oil Co., Peterson 2	10,000		3677
Mid-Kansas O&G Co., Moore 1	3000		3696
Navarro Oil Co., W. P. Brightwell 1	10,000		3704
John W. Olvey & Sample, W. R. Crim 2	12,000		3741
Petroleum Marketing Corp., W .H. Frederick 1	1200		3632
Pioneer Oil Co. (Moody-Seagraves), A. Thrash 1	2500		3707
Lum Toliver 1	5000		3721
Sinclair O&G Co., D. Bradford 2	1000		3707
W. W. Holland 5	2500		3700
W. W. Holland 7	425		3695
W. W. Holland 9	1300		3705
Smith & Gulf Prod. Co., Peterson 1	15,000		3749
Stanolind O&G Co., Ben Laird 1	12,000		3754
Tidaal Oil Co., J. A. Finney 1	2300		3729
Tidal Oil Co.-Wm. Johnston, Toliver 2	2000		3748
C. E. Upchurch & Allen, W. P. Brightwell 1	10,000		3677
Graddy H. Vaughn et al, C. Young 1	5000		3721
Wainwright-West Oils, Ltd. et al, Camp (7½-ac) 2	1200		3628
Westheimer-Daube-Cox & Hamon, D. M. Peterson 1	15,000		3750
C. L. Witherspoon Oil Co., D. Bradford 1	3500		3675

SMITH COUNTY—

Guy V. Lewis et al, S. S. Cook 1	10,000		3696

VAN ZANDT COUNTY—

Pure Oil Co., J. T. Thompson 10	5000		2933
A. R. Tunnell 6	7500		2955
Ella York (39.6-ac) 5	5000		2920

NORTH TEXAS

ARCHER COUNTY—

Dr. C. W. Wallace et al, K&K 1		*	1800

COOKE COUNTY—

Danciger O&R Co., Truebenbach 3		*	1075
J. G. Rowe (was Humble O&R Co.) Clayton 1		40	1644

HASKELL COUNTY—

Bridwell Oil Co., Stone 1		*	1614

THROCKMORTON COUNTY—

Swain & Holcomb, Morrison 1		*	540

WICHITA COUNTY—

J. H. Turner et al, Davis 1		*	1803
T. F. Hunter Oil Corp., American Ref. fee 5		*	1296
The Texas Co., Waggoner 397		25	734

NORTH YOUNG COUNTY—

Culbertson Bros. Co. et al, Jones 1		*	800
Lee & Brashear, Jeffery 1		*	854
McClung & Dawson, Hunter 1		*	640
McDonald & Campbell, Leberman 1		*	750
Putnam-Panhandle. Taack 1		*	770
A. H. Stoltz et al, Baldwin 2		*	685
Texas-Petroleum, Jennings 1		*	793
Wichita Prod. Co., Keith 1		10	708
Willis & Terrell, Belknap 1		*	503

CENTRAL WEST TEXAS

BROWN COUNTY—

Hammon & Heyser, Starkey 1		4	882
Mac T. Anderson et al, Burkett-Newton 1	¶3¼		1456
Pann Pet. Corp., Fry 1		*	1610

COLEMAN COUNTY—

Anderson et al, Burkett 1		150	1614
Brek Oil Co. (Brown & Ekholm), Golson 10		110	1606
Jamison-Pollard & Forster, Kingsberry 2		120	1365
Neversuch Oil Co., Burkett 1		150	1601

PALO PINTO COUNTY—

Beatty et al, Slemmons 1		*	1640

TEXAS PANHANDLE

HUTCHINSON COUNTY—

Canadian River Gas Co., Dunnaway 1	¶35		2725

WEST TEXAS

JONES COUNTY—

Yinglin et al, J. A. Williams 1		175	2543

PECOS COUNTY—

Cardinal Oil Co., Selman 1		*	1765

REAGAN COUNTY—

Group One Oil Corp. et al, University 2-B, (dd)	¶173-11,710		8667

TEXAS GULF COAST

BARBERS HILL—

Sun Oil Co., Smith 1	3125		5450

HANKAMER—

Gulf Prod. Co., Boyt 12	1560		4455

MOORES FIELD—

Gulf Prod. Co., Moore 28		550	5463

MOSS BLUFF—

Humble O&R Co., Sterling 7		540	5855
Gulf Prod. Co., McFadden 3		*	6296

PIERCE JUNCTION—

Rio Bravo Oil Co., GH&SA 102		70	4419
Mike Kouri & Grayburg Oil Co., Bender 1		*	4205

SOUTH TEXAS

GUADALUPE (Darst Creek)—

Mag. Pet. Co.'s R. Miller 8		103	2640
Sun Oil Co.'s Knobloch 14	1740		2590

JIM WELLS COUNTY—

Carsil O&G Co.'s McGill 1	¶50		2683

LIVE OAK COUNTY—

Southern Exploration Co.'s Ponder 1		*	4520

NUECES COUNTY—

Saxet Oil Co.'s Dunn 7	¶30-90		4296

REFUGIO COUNTY—

Houston Oil Co.'s Helen Ryals 4		250	3668
United Prod. Co.'s Mitchell 4		800	6451

WEBB COUNTY—

O. W. Killam's Cuellar 4		*	3080
South Texas Prod. Co.'s Benavides 4	¶10		1709

ZAPATA COUNTY—

S. R. & C. Oil Co.'s Montemayor 5-D		*	1492
O. W. Killam's Bustamante 4		*	1996
Nordan and Morris Bustamante 1		*	2092

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Wildcat Reports From All Sections

CENTRAL EAST TEXAS

Company, Well and Location	Initial Production Bbls.	Depth
RUSK COUNTY—		
Leonard Pet. Co.'s Adams 1	*	3334
UPSHUR COUNTY—		
Tips DeArmand-W. S. Capps et al, Chas. Cobb 1	*	3864

BOWIE COUNTY—Mayfield Oil Royalties & Devore's R. B. Cooper 1, W. M. Ward sur, elev 360 ft, dr 870 ft. Parkington & Jones et al's W. W. Whybark 1, J. H. Dyer sur, dk. W. A. Swift-G. W. Hindman & Tom Ball (was Maud Redwater Oil Co.'s) Roy Merritt 1, Y. S. McKinney sur, dr 1265 ft. Lee Timberlake et al's Tidwell 2, L. M. Rice sur, elev 290 ft, dr 2055 ft.

CASS COUNTY—S. D. Hunter et al's M. Felkner (66-ac) 1, J. L. Chambers sur, elev 248 ft, dr 2315 ft. C. E. Murdock et al's G. W. Coody-Forst Nat'l Bank 1, Evans Watson sur, elev 401 ft, Pecan chalk 2522-2953 ft, dr 3005 ft. Olds-Smith et al's Joe Athenay 1, J. C. Byers sur, dr 1610 ft. Pigg & Davis' Ray Bryan 1, Albert Latimer sur, dk. John C. Rogers et al's W. Q. Henderson 1, Wm. Davis sur, elev 354 ft, sd 955 ft; Lanier 1, K. A. Welborn sur, elev 366 ft, sd 1920 ft. Smith-Adkisson et al's Wilson 1, J. A. McFarland sur, dk. J. E. Smitherman et al's A. S. Fell 1, John Farrell sur, elev 295 ft, Pecan chalk 2405-2925 ft, top Georgetown lime 3765 ft, sd 3783 ft.

CHEROKEE COUNTY—D. Harold Byrd et al's Fariss 1, elev 215 ft, dr shale 3375 ft. W. G. Gray et al's H. Kyle 1, Jas. McClain sur, lcn. McDonald Bros. et al's W. A. Newton 1, Thos. Quevedo sur, elev 309 ft, dk. Rowan-Nichols Oil Co.'s Ousley 1, T. L. Smith sur, rig. Wm. A. Stone et al's E. M. Decker 1, Geo. Ruddle League, dr 2810 ft. Lee et al's E. Singletary 1, Tillman Waters sur, rig. Sinclair O&G Co.'s C. T. Martin 1, Larkin Baker sur, rig; J. R. McRae 1, F. J. Ballanova sur, rig.

DELTA COUNTY — The Delta Dev. Co.'s M. Neatherly (26-ac) 2, J. B. Alexander sur, sd 2650 ft. Everett Drilling Co. et al's M. Sansing 1, J. B. Craig sur, sd 3335 ft. D. S. Hoad et al's J. J. Baker 1, R. Carson sur, elev 437 ft, sd 1550 ft. Worthington & Stedham's W. H. Dejernett 1, E. Chick sur, elev 492 ft, sd 1925 ft.

FRANKLIN COUNTY—Harper-Byers Oil Co.'s A. J. Laws 1, D. G. Rogers sur, sd 2770 ft.

LAMAR COUNTY—K. O. Bundy et al's G. S. Legate 1, J. V. Cheney sur, rig. Everett & Allen's J. A. Guest 1, Luke Roberts sur, sd 2200 ft. Puritan Oil Co.'s Geo. Parr 1, R. Russell sur, dk.

LEON COUNTY—Sun Oil Co.'s Ella Grayson 1, Marquette Blk., coring 2850 ft.

LIMESTONE COUNTY—E. E. O'Byrne et al's S. W. Hancock 1, H. York sur, sd 1165 ft.

NACOGDOCHES COUNTY — Benedum & Trees' Conkrite 1, Chireno sur, set surf cas 675 ft. C. M. Bowie's Miller 1, Strode sur, ru. Burke et al's Pattison 1, Jose de los Santos 1, sd 4270 ft. Fain & McGaha's Pirtle 1, Edward sur, lcn. Matthew Foreman's Mattauer 1, dk. Scully & Harwell's Driver 1, de Torres sur, set surf cas 100 ft. Sequoid Oil Co.'s Boyd Est. 1, ru. John Starks et al's Langford 1, dr 2900 ft. W. W. Wheeler's Parmalee 1, sd 2000 ft.

RAINS COUNTY—Rains County Oil Corp. (R. A. Westbrook's) Wm. Cates 1, Calvin Gage sur, top Pecan chalk 2232 ft, dr 2410 ft. Berry & Hale's Owenby 1, J. Alexander sur, dk.

RED RIVER COUNTY—E. L. Chapman et al's Morris-Guest 1, S. Larkin sur, sd 2745 ft. Droppleman & Bundy's J. W. Cunningham 1, S. V. Chi sur, sd 2745 ft. Echols & Peters' E. Howison 1, W. Humphries sur, dk. Everett & Allen's W. F. Bryan 1, P. Vaughan sur, dk. Pierson et al's J. R. Dellahunty 1, sp and sd. Johnson Pet. Co.'s S. C. Style 1, E. M. Dean sur, sd 2345 ft.

ROCKWALL COUNTY—A. W. Walker & Son et al's M. S. Jones 1, S. Simmons sur, sd 700 ft; Paul Snow 1, J. E. Sherwood sur, sd 926 ft.

ABBREVIATIONS

NOTE—The following is the explanation of abbreviations, signs, etc., used in completion and wildcat reports: *—dry hole, abandoned well; ‡—salt water; †—junked and abandoned; ¶—million feet of gas; abn—abandoned; bbls—barrels; b.s.—basic sediment; cas—casing; co—cleaning out; dk—derrick; dr—drilling; fsh—fishing; ft—feet; in.—inches; lcn—location; m—milling; n, s, e, w—north, south, east, west; r—reaming; sd— shut down; sdtr—side-tracking; sp—spudding; sr — straight raming; std — standardizing; sw — salt water; td—total depth; ur—underreaming; wo—workover; wosr—waiting on standard rig.

RUSK COUNTY—Dan Brooks et al's Alford 1, J. D. Reel sur, top Pecan chalk 2560 ft, dr 2675 ft. Carolyn Oil Corp.'s E. C. Carey 1, John Piburn sur, lcn. Clark & Cowden's J. T. Mercer 1, M. A. Young sur, Pecan chalk 2450 to 2830 ft, Austin chalk 3416-3534 ft, top Georgetown lime 3551 ft, abn 3595 ft. Devonian Oil Co. & Gulf Prod. Co.'s R. A. Motley 1, Wm. Killen sur, top Pecan chalk 2684 ft, dr 2700 ft. Daniel & Tom Patten's Mercer-Crews 1, M. A. Young sur, Pecan chalk 2400-2840 ft, Austin chalk 3416-3536 ft, top Georgetown 3551 ft, abn 3593 ft. R. W. Giles (Shreveport Prod. Co.'s) Newt Orr 1, Wm. Tippett sur, dk. F. Griffith et al's F. J. Lowe 1, Wm. Williams sur, elev 366 ft, top Pecan chalk 2790 or 2820 ft, dr 2990 ft. J. S. Kimbrough et al's Wetherly 1, J. I. Sanches sur, sp. Laster Oil Co. & Miller's B. B. Gray 1, Jas. McLean sur, dk. Leonard Pet. Co.'s Adams 1, S. C. George sur, top Pecan chalk 2135 or 2365 to 2730 ft, top Austin chalk 3145 ft, top Georgetown lime 3269 ft, abn 3334 ft. Morefield Drlg. Co. & Head's J. Ector 1, Daniel Clark sur, top Pecan chalk 2420 or 2451 ft, dr 2900 ft. Pearl Oil Co. (Paul Vitek's) Eaton 1, F. Cordova sur, Pecan chalk 2714-3090 ft, cem cas on oil sand 3685 ft. Rusk County Oil Co.'s Robertson 1-A, dr 650 ft. Nat Sadler et al's Ed. Sparks 1, Abner Nail sur, sd 1300 ft. Ward Oil Corp.-J. R. Elliott & Johnston Bros.' Thrash 1, F. Cordova sur, Pecan chalk 2764-3168 ft, Austin chalk 3548-3584 ft, cem cas on oil sand 3753-68 ft.

SMITH COUNTY—Big Indian Oil & Dev. Co.'s C. Mills 1, Jas. Jordan sur, elev 420 ft, rig. Howard Pet. Co.'s Lee Holt 1, Barnes Clark sur, sp. Imperator Oil Corp.'s I. M. Green (53.3-ac) 1, T. Hogan sur, sp and sd. C. M. Joiner et al's W. M. Wright 1, E. Van Sickle sur, dr 2115 ft. Magnolia Pet. Co.'s J. R. Wright 1, Juan Vargus sur, dk. Owen-Sloan Oil Co.'s M. Starnes 1, Sam Epps sur, dk. A. W. Phillips Oil Operators' M. T. Cole 1, lcn. Ruffin-Williams et al's H. Florence 1, Barnes Clark sur, rig. Sinclair O&G Co. (was J. B. Bunte's) Jarvis 1, Juan Vargus sur, sp. T. B. Slick Est. & J. G. Kugle, Jr.'s, M. Freeman 1, A. J. Lagrone sur, elev 498 ft, Pecan chalk 3080-3275 ft, co to deepen 3623 ft.

UPSHUR COUNTY—Arcadia Ref. Co.'s P. S. Johnson 1, J. H. Mallory sur, rig. Dr. F. F. Beeler et al's R. H. McClelland 1, M. P. Torres sur, dk. Breman & Woods' Robertson 1, J. Stephenson sur, rig. Tips DeArmand et al's Chas. Cobb 1, M. Mann sur, elev 428 ft, Pecan chalk 2590-3118 ft, top Austin 3723 ft, cored salt water sand 3771-3842 ft, abn 3864 ft. J. W. McCullough et al's John Copeland 1, M. Mann sur, lcn. Mudge Oil Co.'s J. D. Richardson (92-ac) 1, D. Ferguson sur, rig. Penn Oil Co. et al's O. B. Cage 1, J. B. Davenport sur, top soft Pecan 2574 ft and top hard chalk 2634 to 2916 ft, dr 3295 ft. E. R. Perkins et al's Kay 1, T. J. Elliott sur, rig.

VAN FIELD—Helms et al's C. E. Bogue 1, Marshall University sur, elev 461 ft, sd 3098 ft. Humble O&R Co.'s R. S. Blake 11, dr 2450 ft. Pure Oil Co.'s J. A. Bracken 3, coring 2645 ft; L. M. Brawner (147.9-ac) 2, rig; B. E. Crim (40-ac) 2, coring 2938 ft; Davis 1, dk; H. C. Gilbert 2, top Pecan chalk 1870 ft, cem cas 2902 ft; A. F. Magers 2, testing 2927 ft; A. G. Maxfield 3, cem cas 305 ft; Mary P. Neill (100-ac) 4, sp; M. F. Shirley (38-ac) 4, cem cas 313 ft; J. R. Shivers (46-ac) 2, rig; B. F. Smith 5, cem 2750 ft; J. C. Stewart (16-ac) 3, rig; W. F. Swain (20-ac) 4, dk; R. L. Wells 5, dk; Ella York (39.6-ac) 3, sd 2455 ft; E. York (40.1-ac) 6, rig. The Texas Co.'s R. V. White (34.95-ac) 3, rig.

WOOD COUNTY—Wood County Dev. Co.'s M. M. Rick 1, Daniel Fuller sur, sd 1500 ft.

EAST TEXAS

HARRISON COUNTY — Hunter et al's Daugherty 2, W. B. Burris sur, 12½ cas 245 ft, ta in Georgetown 3563 ft. Karona Pet. Co.'s A. J. Bohler 1, S. F. Sparks sur, elev 310 ft, top Nacatosh 1437 ft, sd 2020 ft. O. H. Parkening's T. J. Taylor 1, Walter H. Payne sur, rig; T. J. Taylor 2, J. C. Hawley sur, dk. Rowan & Nichols' Henry Pitts 1, E. A. Merchant sur, lcn. W. H. Hobson, Tr.'s, Taylor 1, Henry Vardeman sur, elev 284 ft, 12½ cas 355 ft, top chalk 2095 ft, top Georgetown lime 3183 ft, ta in Georgetown lime 3540 ft. Crump & Hannagan's Dunn 1, Bettie Humphries sur, elev 330 ft, base Pecan Gap and top Saratoga 2830 ft, ta 4006 ft. W. G. Ray Drilling Co.'s Hall 1, D. Davis sur, 10-in 173 ft, top Austin chalk 3445 ft, base Austin chalk 3471 ft, top Pecan Gap 2257 ft, base P. G. 2859 ft, top Georgetown 3472 ft, sd wo. Siegel Bros. et al's T. J. Taylor 1, F. O'Neal sur, lcn. Sinclair O&G Co.'s Davenport 1, J. V. Morton sur, elev 396 ft, top Pecan Gap 2420 ft, base P. G. 2960 ft, cored sand 3693-98 ft, arr ds test, td 3712 ft. Geo. L. Pace's Barker 1, Victor Pedraso sur, rig. Banner et al's Lowry 1, Stanfield sur, dk. Ryan Cons. Pet. Corp.'s H. H. Key 1, E. Carroll sur, lcn.

MARION COUNTY—Trammell et al's Hussey 1, Chas. Lockhart sur, elev 282 ft, top chalk 1771 ft, 8¼ cas 1514 ft, junk in hole, td 1878 ft. Rondeau & Hindman's McGaugherty 1, W. J. Wills sur, sd 2450 ft. Hindman et al's Lindsay 1, Alexander Albright sur, sd 400 ft. Shasta Oil Co.'s Johnson 1, Wm. Mason sur, cored sand no show, sd 2250 ft. Eden Oil Co.'s DeWare 1, R. Hazelwood sur, 10-in cas 400 ft, dr 450 ft. Sinclair O&G Co.'s Wright-Braden 1, Jacob Grover sur, dr 3210 ft. D. R. Coulter 1, William Russell sur, sp. Claunch et al's Laun 1, Henry Fugham sur, dk.

PANOLA COUNTY—Knott et al's Marion Durham 1, Chas. Haley sur, 6⅝ cas 2670 ft, sd 3190 ft. Smith et al's Hunt 1, Albert Johnson sur, dk. Bell et al's Burnett Lbr. Co. 1, S. B. Hendrick sur, elev 186 ft, sd 3335 ft. Dillon & Bradham's Baldwin 1, Hampton West sur, 12½ cas 43 ft, claim top Pecan Gap, sd 1500 ft. United Prod. Corp.'c Steele 17, B. C. Jordan sur, lcn (Trinity test). Neff et al's Brumble 6, B. C. Jordan sur, dk (Trinity test). Texas Co.'s Brumble 6, Jno. Womack sur, 10-in 1200 ft, dr shale 2190 ft (Trinity test). Daisy O&G Co.'s Rucks Hrs. 1, Jno. Palmer sur, 12½ cas 780 ft, top chalk 1352 ft, 8¼ cas 1900 ft, sd 2600 ft. Ark. La. P. L. Co.'s Werner Sawmill 3, B. C. Jordan sur, 12½ cas 142 ft, 9-in 3448 ft, dr lime 4176 ft. Everett Prod. Co.'s E. L. McDaniels 1, Alamson Barr sur, dry abn at 500 ft, skidded over for third hole, first being abn at 398 ft after gas blowout with fresh water.

SABINE COUNTY—Loring Oil Co.'s Nona Mills Lbr. Co. 1, Jas. Mason sur, ta 4803 ft.

SHELBY COUNTY — Sloane Prospecting Co.'s T. B. Sandford 1, M. M. Vann sur, rig; Windham 1, A. H. English sur, rig. Chapparal Oil Co.'s Holt 2, Matthew Moore sur, sd wo rotary, td 3111 ft. I. M. Bradley et al's J. J. Asberry 1, G. W. Mitchell sur, dk. E. L. Chapman's Pickering Lbr. Co. 1, C. F. Henry sur, 10-in 240 ft, dr 1180 ft. Maulding et al's Frost Lbr. Ind. 1, A. B. Fountain sur, sp dr 50 ft.

TEXAS GULF COAST

ANGELINA COUNTY—R. D. Moore's Abney Est. 1, sd 600 ft. Pollack Oil Co.'s Sessions 1, de la Garza sur, lcn.

AUSTIN COUNTY—O'Hara et al's Schrader 1, Hacienda sur, sd 3480 ft. Empire's Kunze 1, San Felipe, dr 6420 ft shale. Parmeson & Cafferkey's Scholekte 1, Fitzgibbons sur, dr 400 ft sand.

BRAZORIA COUNTY—Thos. Faust et al's Fee 6, sd 6220 ft. United Synd.'s Speer 1, 3 mi n Danbury, dr 1800 ft gbo. Freeport Sulphur Co.'s Fee 2001, Bryan Mound, sd 5140 ft. Layne et al's Wisdom 7-A, Damon Mound, set 8¼-in cas 3670 ft. The Texas Co.'s Ewing 1, Manvel, dd, 7600 ft. Rycade & Amerada's Seaburn 1, Stratton Ridge, dr 7300 ft lime.

BURLESON COUNTY—Mid-South Oil Co.'s Duckworth 1, sd 2598 ft. Reynolds Oil Co.'s Harris 1, sd 400 ft.

CALHOUN COUNTY — The Texas Co.'s Smith 1, Chocolate Creek, dr 3410 ft sand.

FAYETTE COUNTY — Elam & Reynolds' Florence 1, sd 1020 ft.

FORT BEND COUNTY—Gulf's Moore 28, comp for 550 bbls at 5463 ft.

GALVESTON COUNTY—Marrs MacLean's Cade 20, ru.

HARRIS COUNTY—Humble's Minnetex 5, Mykawa, abn lcn; Minnetex 6, lcn. Mike Kouri & Grayburg Oil Co.'s Bender 1, Pierce Junction abn 4204 ft. Rio Bravo Oil Co.'s GH&SA 102, comp for 70 bbls at 4419 ft; Settegast 21-A, lcn. Smith-Hamill Dr. Co.'s Parsons 1, lcn. Smith et al's Fee 3, Pierce Junction, prep to pump. Tilton and Perot's Gulf Jones Fee 1, woc 1600 ft. Warner-Quinlan's Minchen 2, dr 4350 ft sand and shale.

JEFFERSON COUNTY—Humble's McFadden 1, Big Hill, dr 6240 ft sand. Keith et al's Reed-Hankamer 1, dr 4000 ft sand and shale. The Texas Co.'s Pipkin 4, Big Hill, dr 5020 ft sand and shale.

LIBERTY COUNTY — Cranfill-Reynolds' Davis 1, set 12½-in cas 1330 ft. Gulf's Boyt 12, Hankamer, comp for 1560 bbls at 4455 ft. Gulf's McFadden 3, Moss Bluff, abn 6296 ft. Humble's Breeden 2, dr 5720 ft shale; Sergent 2, woc 5890 ft; Sterling 7, comp for 500 bbls 5855 ft.

ORANGE COUNTY—Crews Oil Co.'s Mansfield 1, dr 1400 ft shale.

POLK COUNTY—Freeman et al's Freeman 2, sd 2400 ft.

ROBERTSON COUNTY—Long and Cates' Maris 1, dk. W. N. Quick's March 1, sd 1000 ft.

SAN AUGUSTINE COUNTY — Lambeau Thompson Dr. Co.'s Whitton 1, lcn. Arkansas Fuel Oil Co.'s McMurray 1, dr 3600 ft shale.

TYLER COUNTY—King Oil Co.'s Caswell 1, sd 1240 ft. Texas Sun Co.'s Wilson 3, dr 4730 ft rock. L. H. Wentz's Long Bell Lbr. Co. 1, woc 2210 ft.

WASHINGTON COUNTY—Cord Oil Co.'s Hahn 1, dr 1885 ft shale. Yegua Oil Co.'s Graves 1, sd. Penn Oil Co.'s Kamas 2, dr 1390 ft gbo. Sun Oil Co.'s Clay 5, dr 1340 ft shale; Marcus 3, lcn.

WHARTON COUNTY—H. H. Givans' Hudgins 3 dr 1350 ft shale.

LOUISIANA GULF COAST

ASCENSION PARISH—Gulf's United Land Co. 19, Sorrento, prep to set screen 4870 ft. Triumph Oil Co.'s Lacey 2, stdg 4225 ft.

AVOYELLES PARISH—M. L. Vincent's Morrow 1, sd 4220 ft.

CALCASIEU PARISH — Wilfred Lahay's Jardell 1, 2 mi e Vinton, sd 3258 ft. Dr. Thomas et al's Hewitt 1, 2 mi e Edgerly, lcn. Vacuum's State 7, sd 5200 ft; Miller 12, stdg 3790 ft; Miller 32, lcn. Union Sulphur Co.'s Moss 2, Lockport, dr 6200 ft shale. J. O. Davis' Ind. Lbr. Co. 1, Starks, stdg 6568 ft. Union Sulphur Co.'s Fee 762, Sulphur, set 6⅝ inch cas 5860 ft; Fee 765, dr 2140 ft rock; Fee 766, dr 4990 ft lime,

CAMERON PARISH — Freeport Sulphur Co.'s Gulf Land Co. 7, Black Bayou, lcn. Shell's Watkins 16, comp 500 bbls 4519 ft; Black Bayou State 2, dr 4290 ft salt. The Texas Co.'s Calcasieu Lake 7, lcn; State 8, E. Hackberry, dk. Vacuum's Cameron Meadows 2, dr 2740 ft shale. Magnolia's Sweet Lake Land Co. 2, dr 4870 ft sand and lime. Pure's Yount-Lee 10, Sweet Lake, dr 6940 ft shale.

IBERIA PARISH—Jefferson Lake Oil Co.'s Lake Peigneur 11, Jefferson Island, dr 780 ft rock.

IBERVILLE PARISH—Standard of La.'s Gay 1, Bayou Choctau, dr 4170 ft shale; L. Baist 1, dr 3420 ft shale; Schwing 1-A, Bayou Blue, dr 5880 ft sand; Schwing 3, sd 2990 ft; Wilbert 7, pocket; Case 2, Des Glaise, t.a.; Wilbert 9, dr 1100 ft sand and gravel.

JEFFERSON DAVIS PARISH—H. T. McClain et al's Atterbury 1, Welsh, abn 6075 ft. A. V. Peters' Smith 1, Welsh, dr 820 ft sand and gravel.

LA FOURCHE PARISH—The Texas Co.'s Leesville 2, dr 3540 ft shale.

ST. JAMES PARISH — Convent Oil Co.'s Jacobs 1, dr 2270 ft gumbo.

ST. LANDRY PARISH—The Texas Co.'s Botney Bay 9, Port Barre, swabbed small amt oil 3399 ft.

ST. MARTIN PARISH—Humble's Woodward 1, Bayou Bouillon, dr 5920 ft sand; State 4, dr 4620 ft sand.

ST. TAMMANY PARISH—Washington & St. Tammany Drlg. Co.'s Coussack 2, sd 2030 ft.

TANGIAPAHOE PARISH—Jean Dev. Co.'s Lake Superior Oil Co. 1, sd 3010 ft.

TERREBONNE PARISH—La. Gas & Fuel Co.'s Minor Estate 1, Houma, sd 6300 ft. The Texas Co.'s Bay St. Elaine 1, fsh 4750 ft; Four Isle 5, dr 400 ft sand; Lake Barre 8, dr 6710 ft rock; Lake Barre 10, lcn; Lake Barre 11, lcn; Lake Barre 12, lcn; Lake Barre 13, lcn; Lake Barre 14, lcn.

WEST FELICIAN PARISH — Putnam Synd.'s Como Plantation 2, dr 700 ft shale.

SOUTH TEXAS

ATASCOSA COUNTY—Bender and Cullen's Medina Irrigated Farms 1, sw corner of W. Klempcke sur No. 439, dr 2987 ft in glenrose.

BASTROP COUNTY—Turner, Wharton & Anderson's J. E. Harris 1, Joshua Gray sur, 3 miles n Dale pool, dr 2061 ft.

BEE COUNTY—Alexander et al's McFall 1, 3 miles s Skidmore, sd 295 ft. Catlett and O'Neill's Miller 1, Romdal Hoskiss sur, 8 miles w Beeville, dr 2625 ft. Mineral Oil Co.'s (Mauldin and Fisher) A. J. Kimball 1, Stephin Winship sur, 7 miles sw Pettus pool, in Grayburg area, prep to set csg, well showed 175 pounds pressure 3½ minutes in sand 3537-40 ft. Hicks et al's Billingsly 1, B. Q. Hadley sur, 1 mile ne Grayburg pool, dr 3038 ft. J. S. Mauldin's Mauldin 1, G. A. Kerr sur, just south and west of Pettus townsite, wait on csg 3862 ft. E. S. Price's Weiss 2, sd 4552 ft. United Product Co.'s Ray 33, between townsite and discovery pools, Pettus, G. A. Kerr sur; Ray 35, 1100 ft e Ray 34, Thos. Hanson sur, set 6⅝ inch csg 3957 ft, woc, sand 3958-65 ft; Ray 36, n of e extension wells, Pettus, T. Hanson sur, dr 3358 ft.

BEXAR COUNTY—Russell & Moore's A. O. Mills, Navarro sur, sd 938 ft. J. Morgan Russell's Price Story 1, A. Navarro sur, 10 miles s of San Antonio on Somerset road, redr 1058 ft. Uechert et al's Palfrey 1, 7 miles se San Antonio near Brooks field, prep to re-dr 1814 ft. Weilbacher and Brock's Ernest 1, J. Christepher sur, 2 miles n Somerset, sd 925 ft.

BLANCO COUNTY—Hardy Sitton's Standeford 1, (formerly Lyles and Adams) sur 155, 3½ miles ne Blanco City, to redr 952 ft; McMillen 1, 2 miles w Blanco City, Benjamin Williams sur No. 125, dr below 786 ft. Meeks et al's Walker 1, ne cor Noel Nixon sur No. 23, 4 miles n Blanco City, pull csg to recover tools, total depth 1025 ft. Forest Oil Co.'s Hohenberger 1, sur 94, to mov on larger rig.

BROOKS COUNTY—The Texas Co.'s Allen Land and Cattle Co. 1, 7110-acre San Antonita Grant, Lassiter area, to make lcn. Ed East's Garcia 3, Las Mastena y Gonzalene Grant, sd 960 ft. Houston Oil Co.'s Wormser-Holbein 3, Palo Blanco de Maguellas Grant, near Palo Alto creek, dr 4433 ft.

CALDWELL COUNTY—J. E. Mills et al's McMahon 2, 50 ft e of McMahon 1, Pinchebach sur, 6 miles se Lockhart, set csg 960 ft. V. F. Neuhaus and Camp's J. B. Moore 1, Wm. Clinton sur, ¼ miles ne Mills test, 6 miles s Lockhart, dr 2506 ft, top chalk 2350 ft.

COMAL COUNTY—Caldwell and Lanier's T. J. Byler 1, 10 miles s Blanco City, HE&WT sur No. S-894, set 10-inch csg 600 ft.

DE WITT COUNTY—Gibson and Strum's Clark 1, s part of county, 1 mile n and little w of Slick pool, Dolores Aldereta sur, spudded.

DUVAL COUNTY—Gus Pape et al's Juan Benavides 1, sub 1 ,Carpenter sur, Mesquite Grant, Cole field, dr 50 ft. F. M. Frahser and R. F. Schoolfield's Bishop Cattle Company 2, sur 135, s extension of S&O field, 6⅝ inch casing set 2320 ft, total depth 2328 ft. Humble O&R Co.'s Kohler 50, sur 164, Kohler pool, dr 5701 ft. O'Byrne et al's Weil Bros. sur 568, 7 miles sw S&O poool, dr 1710 ft. Southern Oil Co.'s King Harper 2, sur 323, lcn.

FRIO COUNTY — Wray and Dunbar's Barnes 1, 1 mile from Big Foot, still waiting on csg at 3662 ft.

GOLIAD COUNTY—Gibson Oil Co.'s Parks 1, (wo), 5 miles ne Goliad, bldg new derrick over hole, total depth 5267 ft. Slick Estate's Reidel 1, core 4209 ft, topped Jackson at 3079 ft.

GONZALES COUNTY—Linden Pet. Co.'s Cowley 1, n part of county, topped chalk 4332 ft, dr 4412 ft.

GUADALUPE COUNTY — S. A. Oil and Royalty Co.'s Dibrell 1, sw of Darst Creek field, sec 6, H&TC Ry. sur, lcn.

JIM HOGG COUNTY—Mag. Pet. Co.'s Y. V. Cuellar 1, W. A. Dannelly sub, sur 575, Share 2, El Peyote Grant, blk 92, dr 2671 ft. P. & M. Oil Co.'s (Peterman and Minahan) Palacios 1, blk 14, sur 231, sd 700 ft. J. W. Pippin's N. Hinnant 1, blk 11, sur 147, dk. A. J. Kolling's (formerly J. D. Pulliam, Jr.) Jones 1, Holden sub, Diego Hinojosa grant, prep to re dr 2844 ft.

JIM WELLS COUNTY—Blair and Son and Stewart's M. Perez 1, sec 9, blk 16, set csg 2123 ft at last report. Carsil O&G Co.'s McGill 1, Wm. D. Baldwin sur, 3 miles n of Armagosa, blew in from sand at 2683-89 ft, ran wild for 36 hours and brought under control and capped, started as dry gasser, but later sprayed considerable water, 6⅝ inch csg set 2682 ft. R. H. Ewell's Doering 1, blk 6, Seefeld Farms lots sub, testing sand 3450 ft.

KARNES COUNTY—Karnes County Dev. Co.'s (Pickett et al) W. J. Hubbard 1, 3 mi w Kenedy, dr 30 ft. J. Morrisey's Ragsdale 1, no report, was down 3050 ft at last report.

KENDALL COUNTY—Theo. Hicks et al's Speck and Wiedner, one-fourth mile se of center of Thomas Fowler sur No. 27, near Comal, Kendall and Blanco county lines, 3 miles se Twin Sisters mountains, lcn. Hardy Sitton's W. B. Garvin 1, D. L. Richardson sur No. 7, 1 mile ne Kendalia, dr 1070 ft.

KERR COUNTY — Col. B. M. Hatridge's Townsite 1, blk 23, Westland Addition, just outside of Kerrville townsite, dr 177 ft. Evans and Gant's Seiker and Mears 1, sw corner of section 1605 CCSD&RGNR Ry. sur, 2 miles ne Love test, dr 1040 ft in sandy shale. Mims et al's J. E. Young, A. E. Bruce sur, sec 28, north and east of Love well, to spud.

LA SALLE COUNTY — Fred W. Volz's Coleman 1, blk 15, sur 514, sd 40 ft.

LIVE OAK COUNTY—Houston Oil Co.'s Parr 1-A, ¾ mile s Brown Land and Cattle Co. 4, John McMillen Grant, near Nueces river, dr 2007 ft in shale; Brown Land and Cattle Co. 4, sw corner M. B. Kivlin sur, Mt. Lucas area, swabbed oil, water and gas 5012 ft, not sufficient to make producer, now dr 5063 ft in shale. Southern Exploration Co.'s Ponder 1, BS&SF sur No. 1, test sw in sand 4139 ft (same horizon as Pettus production).

McMULLEN COUNTY—Brodie, Shearer & Emerich's Shiner 1, 12 miles se Tilden, dr 1202 ft, no further report. V. F. Neuhaus and Standolin Oil & Gas Co.'s J. O. Massey 1, ½ mile s townsite of Lomo Alto, test sw and oil in sand at 2150 ft, tested 11 fourbles sw and some gas in 3 minutes at 1373-78 ft, cored little gas in sand 1390-94 ft, not tested.

NUECES COUNTY—Bess et al's Boorey 1, 2½ miles nw Saxet field, plugged back to 4050 ft after testing sw at 4220 ft, setting casing abt 4035 ft to test sand 4037-46 ft. Houston Oil Co.'s Ollie Purl 1-B, blk 7, R. Peters sur

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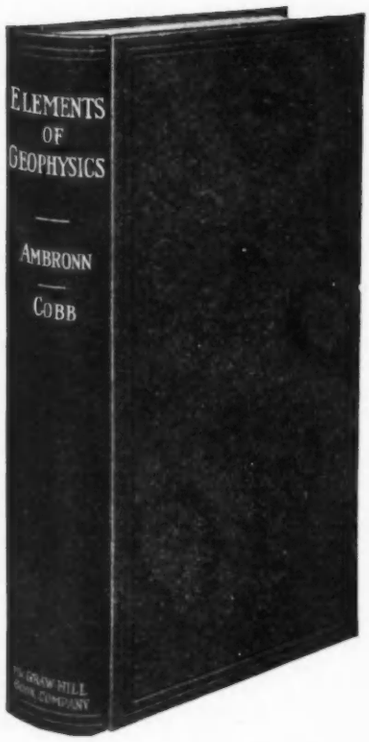

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No. 2, Agua Dulce field, dr 5886 ft. Saxet O&G Co.'s Dunn 7, Saxet field, completed 90 bbls oil and abt 30,000,000 cu ft gas, 1250 lbs. pressure, 4296 ft. Moody-Seagraves Producing Co.'s Sedwick, Saxet field, completing 4097 ft.

REAL COUNTY—Evans and Sprinkle et al's Marcus Auld 1, sec 15, blk D, HE&WT Ry. sur, 4 miles ne Love test, full sw at 4180 ft; Haby 1, sec 175, AB&M sur, 7 miles sw Love producer, dr 1388 ft. Gant and Kilgore and Eastland Oil Co.'s Dan Auld 1, sec 23, CCSD &RGNR Ry. sur, 3 miles sw Love producer, set csg 1570 ft.

REFUGIO COUNTY — Houston Oil Co.'s Rooke 1-B, 2 nukes sw Refugio, ½ mile w production, sd 6804 ft; Rooke 14 (dd) in old gas area, 3 miles w Refugio townsite, dr 5110 ft at last report. Morgan and Rutherford's Rogers Heirs 1, ¼ mile n of Smith-Rogers well, 3 miles w townsite, sd 3684 ft. L. L. Smith's Rogers Heirs 2, 3 miles w of townsite, sd 5110 ft.

SAN PATRICIO COUNTY — United Production Co.'s Cage 3, White Point field, dr 3575 ft in hard lime, sand 3494 ft, show some oil.

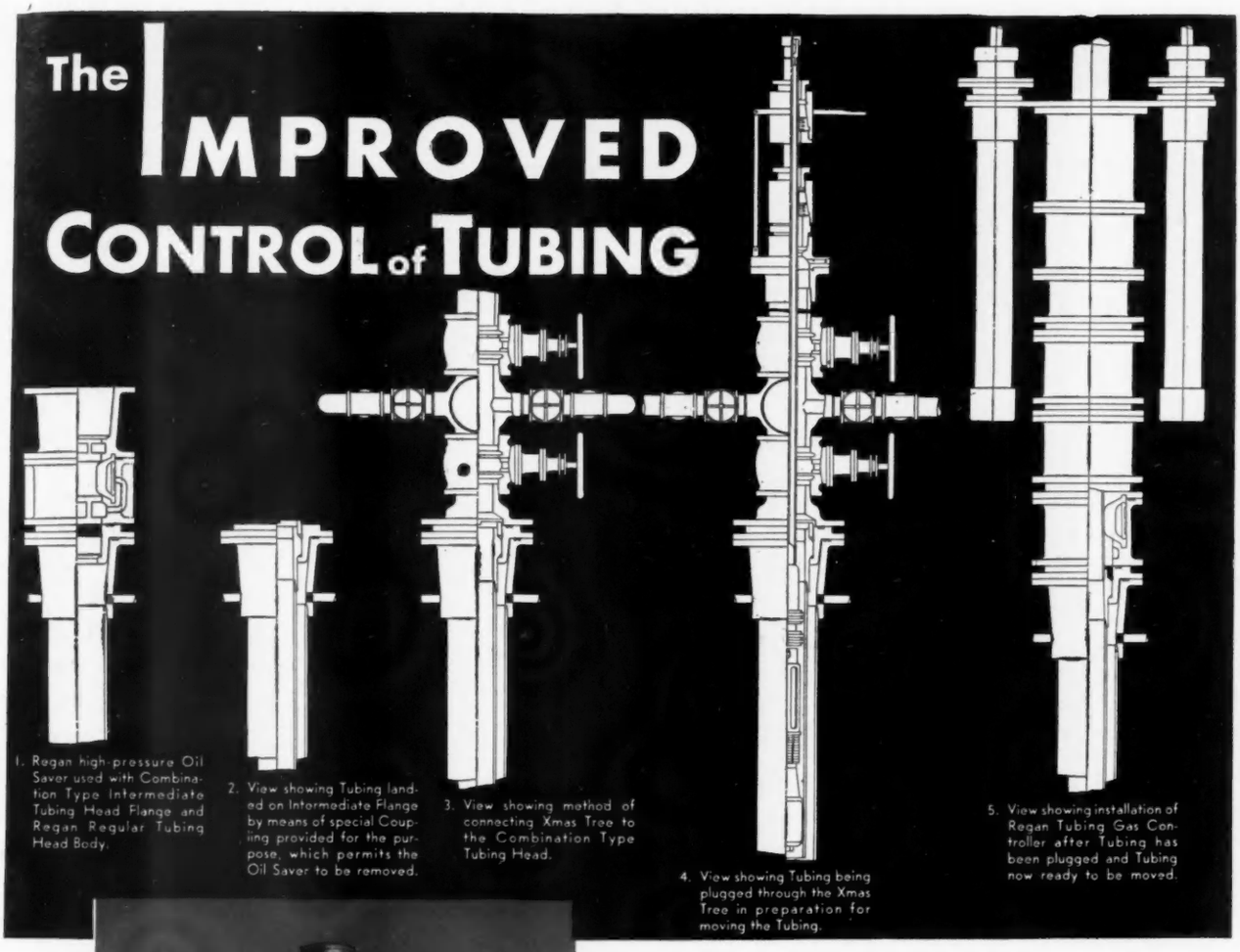
STARR COUNTY—Kush and Duerkson's Kelsey Bass 1, blk 9, sub of Porcion 75-76-77, Jurisdiction of Camargo, sd 856 ft. Los Olmos Oil Co.'s Kelsey Bass 2, blk 6, sub of porcion 75-76-77, Jurisdiction of Camargo, sd 881 ft. Sacremento O&G Co.'s Seabury 1, sd 349 ft.

VICTORIA COUNTY — Lion Oil Refining Co.'s McFadden 3-A, Maria J. Traviesa grant, McFadden district, set 12½ inch csg at 1029 ft. The Texas Co.'s McFadden 3, w of No. 2 wild gasser, dk. United Prod. Co.'s McFadden 1-B, near Guadalupe river, test sw at 3633 ft, now fish for core bbl at 3702 ft.

WEBB COUNTY—Cole Pet. Co.'s (Carson) Benavides 4, sur 1601, dr 300 ft. O. W. Killam's Killam 1, sur 1617 ft, Reiser sector, dr 2808 ft; Cuellar 4, share 4, Cuellar Grant, Cole district, abnd 3080 ft. Geo. S. Marshall's C. W. Webster 3, sur 684, dr 4212 ft. Carolina-Texas O&G Co.'s Barnsley 9, blk 13, sur 268, dr 150 ft in hard rock. South Texas Prod. Co.'s (Fansler) blk 320, Myrtle Hale sub. Mariano Arispe Grant, completed 10,000,000 cu ft gas, 307 pounds rock pressure, sand 1704-09 ft, casing set 1704 ft.

ZAPATA COUNTY—Allied O&G Co. and Allen and Morris's Gutierrez 12, share 4, Fansler Partition, Comitas Grant, sd 100 ft. Benson Oil Co.'s S. Vela 1, blk 12, sur 259, dr 850 ft. W. T. (Bill) Henry's Gopher Trust Estate 1, blk 10, sur 4, Fullerton sub of Share 8, Borrego grant, dr 1195 ft. O. W. Killam's A. Bustamante 4, (formerly K&P Oil Co.), blk 6, share 5, Fansler Partition, Comitas Grant, abn 1996 ft; Bustamante 5, blk 7, share 5, Fansler Partition, Comitas Grant, dr 1000 ft; Cuellar 40-C, sur 278, dk; Cuellar 42-B, sur 277, dr 1435 ft. Mid-West Public Utilities Co.'s M. P. de Garza 1, blk 33, M. P. de Garza lands, Pedernal Grant, sd 1580 ft. P. H. Meyers' I. G. Trevino 1, blk 24, sur 412, casing set 1318 ft, sand 1318-28 ft, tested oil and sw, another sand 1362-68 ft, testing. National Oil Co. of Texas' Luther et al 1, blk 97, Da Pron sub. ne ½ Porcion 6 sd 590 ft. Neilson and Coursey's Luther et al 1, blk 11, sec 5, Fullerton sub, share 8, Borrego Grant, sd 1148 ft. J. I. Newton's I. G. Trevino 3, blk 7, sur 66, Ign. Nordan and Morris's Concepcion Bustamante 1, blk 33, Fansler Partition, Comitas Grant, abn 2092 ft. O. & A. Co.'s Garcia 3, share 3, Fansler Partition, Commitas Grant, ru. John Pappas Pool, Inc.'s, Flores 1, 6000 ft from Rio Grande, Porcion 35, dk. Penny Prod. Co.'s Juan V. Cuellar et al 1, blk 1, sur 2, Pappas sub, Porcion 33 and 34, dr 2075 ft. W. R. Shankle's Garza 3, blk 10, sub of Zorro ranch, Comitas Grant, testing, sand 1370 ft, cap 1370-72 ft, sand 1372-76 ft, casing set 1370 ft. S. R. & C. Oil Co.'s Montemayor 5-D, blk 8, sur 64, abn 1492 ft, showed up for a large gasser in alternate sands at 1337-1492 ft, but began leaking around casing when closed in, now plugged. F. A. Talmadge and G. Mackenzie's G. F. Trevino 1, blk 6, sur 4, Marts and Beavens sub, Porcion 2 and 3, sd 517 ft (this was reported as an error in last issue). T. H. Ward's Uribe 1, blk 8, sub of share 7, Partition 6, Trinidad Uribe Partition of Juan V. Borrego Grant, rigged up and standing.

The IMPROVED CONTROL of TUBING



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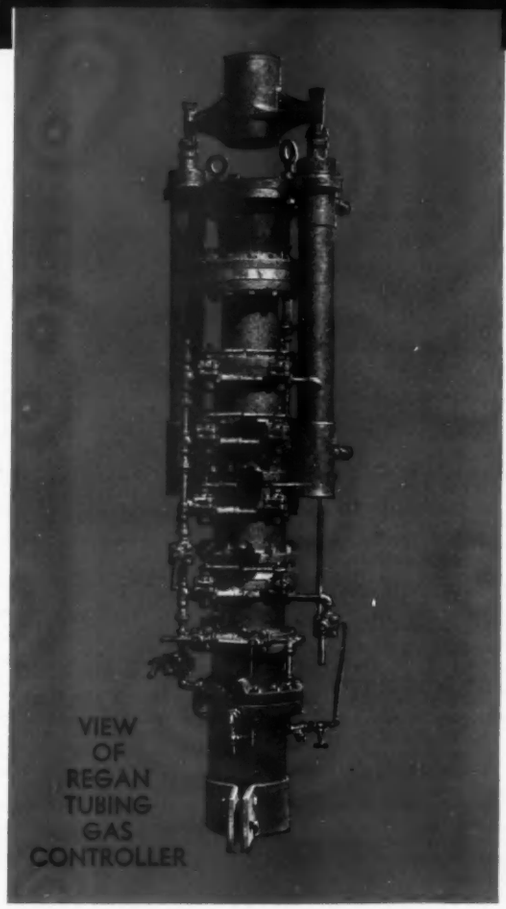
2. View showing Tubing landed on Intermediate Flange by means of special Coupling provided for the purpose, which permits the Oil Saver to be removed.

3. View showing method of connecting Xmas Tree to the Combination Type Tubing Head.

4. View showing Tubing being plugged through the Xmas Tree in preparation for moving the Tubing.

5. View showing installation of Regan Tubing Gas Controller after Tubing has been plugged and Tubing now ready to be moved.



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WEST TEXAS

Company, Well and Location	Initial Production Bbls.	Depth
BORDEN COUNTY—		
Geo. Goodrum et al, E. M. Conrad 1	*	791
COCHRAN COUNTY—		
Continental Oil Co., Slaughter 1-B..	*	5020
TOM GREEN COUNTY—		
Phillips Pet. Co. et al, Gulden-Jennings 1	*	5376

ANDREWS COUNTY—Deep Rock Oil Co. et al's Kuykendall 1, elev 3217 ft, top anhydrite 1678 ft, salt 1720-2810 ft, top brown lime 4045 ft, top white lime 4180 ft, co and flowing by heads after shot 600 qts at 4236-4506 ft, td 4565 ft.

BORDEN COUNTY—Geo. Goodrum et al's Conrad 1, abn 791 ft.

BREWSTER COUNTY—Trans-Pecos O&G Co.'s Jones 1, elev 3073 ft, sd 2800 ft.

COCHRAN COUNTY—Conoco's Slaughter 1-B, abn with hfw 5020 ft.

COKE COUNTY—Reid-Hitchins & Stanolind O&G Co.'s Duncan 1, sp and sd.

CONCHO COUNTY—W. I. Betts & Dennis' Wood-Hendrick 1, sp and sd. A. W. Turner-Cromwell & Wesner's Brosig 1, elev 1699 ft, co 1885 ft.

CRANE COUNTY—Continental Oil Co. & Frank Zoch's Cowden 2-B, top salt 680 ft, swab 25 bbls oil per hour after shot 280 qts at 2340-2490 ft. Cranfill Bros. & Gulf Prod. Co.'s J. B. Tubb 1, elev 2526 ft, salt 505-1400 ft, top brown lime 1410 ft, top white lime 2455 ft, flowing 240 bbls fluid, 94 per cent water, 12 hrs, sd 5305 ft. H. H. Sides et al's B. P. Nolen 1, sp and sd.

CULBERSON COUNTY—Cranfill Bros. Oil Co. et al's Seay 1, sd 1930 ft. W. L. Kornrumpf et al's W. D. Garren 1, sd 1280 ft.

DAWSON COUNTY—R. A. Albaugh et al's Robinson 1, sp and sd.

ECTOR COUNTY—Galt-Brown Co. & Penn Oil Co.'s Cowden 1, elev 3047 ft, dr 1260 ft. Southern Crude Oil Pur. Co.'s Cowden 1, elev 3965 ft, top anhydrite 1782 ft, salt 1872-2805 ft, making 50,000 ft gas 4016 ft, dr lime 4030 ft.

EDWARDS COUNTY—Phillips Pet. Co.'s Holman 2, elev 2274 ft, dr 8075 ft.

EL PASO COUNTY—Tri-State Oil Co.'s Bobadella 1, sd 540 ft.

FISHER COUNTY—Cranfill-Reynolds Co.'s Flanigan 2, dr 3475 ft. Roeser-Pendleton, Inc.'s Gribble 1, elev 1864 ft, sd hfw 3200 ft. Stanolind O&G Co.'s J. J. Steele 2, rig. Texas Unity Oil Co.'s First Nat'l Bank 1, dr 1660 ft. The Texas Co.'s J. A. Jean 1, rig.

GARZA COUNTY—Garza County Dec. Co. (Penny & Porsey's) Justice 1, elev 2266 ft, top salt 550 ft, sd 1042 ft.

GAINES COUNTY—Texas Consolidated Oil Co. & T. P. Coal & Oil Co.'s E. H. Jones 1, elev 3636 ft, top anhydrite 2120 ft, top salt 2225 ft, sd 3435 ft.

TOM GREEN COUNTY—Phillips Pet. Co. et al's Gulden 1, abn hfw 5376 ft.

HOWARD COUNTY—Conoco et al's E. E. Brindley 1, top salt 1170 ft, dr by 10-in cas 1685 ft, td 1910 ft. Greene Prod. Co.'s Denman 1, sp and sd.

HUDSPETH COUNTY—R. G. Patillo & Ed. Welch's K. S. Briggs 1, sd 350 ft.

IRION COUNTY—Stanolind O&G Co.'s W. H. Williams 1, elev 2544 ft, dr 4120 ft. Straughn et al's Tankersley 1, elev 2306 ft, sd 1506 ft. F. E. Webb et al's Nutt 3, dr 515 ft.

JONES COUNTY — Bonds-Trout-Julian et al's Williams 1, elev 1898 ft, sd 2581 ft. Condor Pet. Co. et al's Brewer 1, rig. Jake Croft & Tidal Oil Co.'s W. D. Swann 1, lcn. Ewmo Oil Corp.'s Hoyt 1, testing 300 ft oil in hole at 1971-71½ ft. Hardly Able Oil Co.'s Butler 1, dr 2310 ft. C. C. Julian O&R Co.'s Sears 1, lcn. J. B. Jameson et al's King 1-A, fsh 1490 ft. Shaheen Oil Co. et al's Chittum 1, sd with 1850 ft oil in hole 1972-75 ft, td 2033 ft. Ungren & Frazier's King 1, dr 1770 ft. Sam C. Yingling et al's E. D. Coates 1, dr 1015 ft. Young & McNeill's L. R. Cade 1, rig.

LOVING COUNTY—The California Co.'s J. G. Allen 2, elev 2742 ft, top salt 830 ft, coring 4295 ft; Allen 3, dr 1810 ft; Allen 4, rig. Erwin & Mohres Dev. Co.'s McGinley Corp. 1, rig; J. F. McKenzie 1, sp and sd; Lillie Thompson 1, rig. Folbre & Evans' D. P. Dean 1, fsh 1385 ft. Grisham-Hunter Corp.'s Dean 1, ur 1310 ft. Henshaw et al's Reagan 2, rig. Pete Hoffman et al's Ramsey 1, top salt 760 ft, dr 3620 ft; Ramsey 2, sp and sd. Lewis & Slagel Drlg. Co.'s Cartwright-Henderson 1, elev 2901 ft, salt 585-2907 ft, co 2915 ft. Lockhart & Co.'s I. J. Bell 1, rig. H. W. Martin et al's W. D. Johnson 1, lcn. Richmond Oil Co.'s G. B. Russell 1, rig. W. A. Sudderth & James, Capitola Pool 1, rig. F. S. Tennant et al's Roy Martin 1, rig. West Texas Pet. Corp. (Eppenauer's) J. G. Allen 2, top salt 810 ft, dr 4100 ft; Salisbury 1, top salt 890 ft, dr 4010 ft.

MENARD COUNTY—J. C. Barnett et al's Callan 4, co 315 ft. L. G. Priest et al's Sorrels 1, elev 2279 ft, sd 2965 ft. Voss & Bryan's Brandenberger 1, dr 635 ft.

PECOS COUNTY—Hogan et al's Shearer 1, rig. J. R. Miller et al's Bennett 1, sd 2285 ft. McCarty Oil Co.'s Gray 3, sd 1437 ft. Penn Oil Co. et al's J. B. Alvis 1, elev 3493 ft, dr 2740 ft. O. J. Perren et al's Eaton 2, elev 2437 ft, sd 1765 ft. Pure Oil Co.'s Harrison 1, elev 3495 ft, top Delaware 4265 ft, sd 5000 ft. Riser & White (now Cosby Prod. & Roy. Co.'s) Riser 1, dr 595 ft. W. F. Whittaker et al's M. A. Devlin 1, sp and sd.

REAGAN COUNTY—Group One Oil Corp.'s University 2-B, flowing 11,710 bbls of 60 degrees gravity at 48 degrees temperature oil and 173,000,000 ft gas at 8667 ft.

REEVES COUNTY—The California Co.'s Kloh 2, dr wet shale 1625 ft. Humble O&R Co.'s Balmorlea 1, rig. Lee O. White et al's Mrs. Hersheusen 1, co 4415 ft.

RUNNELS COUNTY—Chas. Dutton et al's Dean 1, sd 2335 ft.

SCHLEICHER COUNTY—Eastland Oil Co. Unit Plan's Tisdale 1, elev 2295 ft, ur 1900 ft. J. D. Wesner et al's Ratcliff 1, elev 2408 ft, dr 2185 ft.

SCURRY COUNTY—R. B. Pender O&G Co.'s Davis 1, elev 2208 ft, top salt 445 ft, fsh 5003 ft. Seiffert & Dibble's Blackman 1, top salt 720 ft, dr 3000 ft.

STERLING COUNTY—W. C. Beesley et al's W. L. Foster 1-A, elev 2518 ft, dr 990 ft.

TAYLOR COUNTY — Adams-Ferguson & Hobbs' Lowe 3, elev 1918 ft, sd 1970 ft. J. B. Jameson et al's Webb 1, elev 1905 ft, dr 6330 ft. Sanger et al's Abilene City Fee 1, elev 1759 ft, sd 2785 ft.

TERRELL COUNTY — Mid-Kansas O&G Co.'s M. H. Goode 1, elev 2405 ft, making dry gas, sd 6120 ft. L. Jones et al's Pankenham 1, elev 2607 ft, set cas 730 ft.

VAL VERDE COUNTY—O. O. Owens et al's Mills 1, elev 2130 ft, sd 6780 ft.

UPTON COUNTY—Bennett Oil Co. & P. H. Williams' Shirk 1-A, elev 3106 ft, top lime 2510 ft, sd with 900 ft oil in hole 2660-2727 ft. C. C. Duffey et al's McClintic 4, dr 1995 ft. Gulf Prod. Co.'s McElroy 92, co with 1600 ft oil in hole 2950 ft; McElroy 93, dr 315 ft. Mintex Oil Co. & Harry Baldwin's Lane 1, dr 440 ft. Bert Weekley Oil Corp.'s McClintic 2, dr 310 ft.

WARD COUNTY—Alpine Oil & Dev. Co.'s Boogher 3, dr 1045 ft. Beckley et al's Johnson 1, sd 445 ft. Bell & Wier's Boogher 1, sd 670 ft; Boogher-Cummings 1, dr 1410 ft. Buster Black et al's Hall-Roberts 1, sp. Alex Bradford et al's B. Carson 1, dr 805 ft. Clyde Bradford et al's Hordage-Wilson 1, dr 500 ft. California Co. & Atlantic Oil Prod. Co.'s A. B. Gordon 1, elev 2523 ft, top salt 1000 ft, co with show oil 2303 ft. Central Gas & Oil Co.'s Lee Monroe 1, rig. Gibson Bros. et al's Johnson 1, dr 650 ft. Gulf Prod. Co.'s Hutchings 7, elev 2648 ft, top anhydrite 910 ft, top salt 1162 ft, fsh tools and flowing 112 bbls oil 2490-2520 ft; O'Brien 17, dr 210 ft. Harkinson et al's A. Emory 1, lcn. Magnolia Pet. Co.'s Atlantic-Sealy 1, elev 2686 ft, top anhydrite 1505 ft, set 8¼-in cas 2016 ft, co 2085 ft. R. F. Owen et al's Johnson 1, elev 2499 ft, top salt 1600 ft, dr 3175 ft. Peck et al's Geo. Merritt 1, dr 320 ft. Rickford & Fugler's Boogher 1, top salt 790 ft, dr 1975 ft. Paul Ryan et al's Allen 1, elev 2931 ft, top salt 800 ft, sd with 1600 ft oil in hole 2180-2244 ft. Shipley Oil Corp.'s Monroe 1-A, elev 2655 ft, top salt 2485 ft, sd 3780 ft; Hayzlett 5, sd after shot, td 2507 ft. Simms Oil Co.'s M. Himmel 1, rig. Chester Smith et al's Boogher 1, dr 2030 ft. White et al's Owenby 1, machine.

WINKLER COUNTY—Magnolia Pet. Co.'s Bashara 1, elev 2884 ft, top anhydrite 829 ft, top salt 996 ft, top lime 2317 ft, cemt hole account water 3367 ft.

WYOMING

BIG HORN—Westland Oil, Inc., 24-54-95, gas at 510 ft. Wisconsin Holdings, 5-55-97, sd 665 ft. Yellowstone Pete Co.'s 1, 7-87-97, sd at 4080 ft with show of oil.

CARBON—Midwest Refining Co., U. P. 1, 27-11-81, sd 1810 ft. Pete Expl. Co. of Calif., 29-23-89, dr 2500 ft.

CONVERSE—Converse O&G Co., 27-33-72, sd 1410 ft. Pioneer Oil Co., 5-31-70, to dr new test.

FREMONT—Texas Prod. Co.'s State 1, 36-33-95, stand cem., td 4485 ft. P. & R. 1, 33-34-92, sd 4906 ft. Yellowstone Oil Co.'s 1, 15-29-92, dr 600 ft. Ward O&G Co., 28-34-90, gas show 1500 ft. Wiebolt et al, 2-35-99, dr 1300 ft.

JOHNSON—R. C. Tarrant et al, 4-43-82, dr bel 2150 ft.

LINCOLN—Mountain Oil Corp.'s 1, 36-25-116, td 1500 ft. Wyo. Prod. Co., 14-42-113, dr bel 1225 ft.

NATRONA—Summit Oil Co., 21-33n-80w, sd 1220 ft, wait equip. Midwest's 11, nw 32-34n-77, stand 5340 ft. Cuyler Oil Co., 23-36n-85w, dr 1100 ft. Golden West Oil Co., 36-36-81, resum 1242 ft. Midwest's Midway 1, ne 23-35n-79w, dr 5802 ft.

NIOBRARA—West Virginia Synd., 7-35-62, td 987 ft, cas trouble.

PARK—Resolute Oil Co., 17-57-101, bailer dr up, co 8355 ft.

SWEETWATER—Vermillion Oil Co.'s 1, se 16-12-99, co 3465 ft.

UINTA—Park City O&G Co., nw 6-15-113, dr bel 2400 ft.

WASHAKIE—Dakota-Wyoming Oil Co., ne 24-47-90w, small show 200 ft, to be cased off. Ohio Oil Co., lot 14, 19-45-92, 15½-inch cem at 782 ft, dr water wells.

WESTON—LeFaivre Oil Synd., se 29-45n-68w, prep to cem 15½-inch at 1000 ft.

MONTANA

BIG HORN—Continental Oil Co., Lynde 2, se 21-6s-35e, sd 3405 ft.

CARBON—Spomont Pete Co.'s Cruse 1, 32-6s-18e, dr 100 ft.

CASCADE—Andover Oil Co.'s Floweree 1, se 29-21-2w, sd 1405 ft. Lone State Oil Co.'s McLean 2, se 13-21-3e, dr bel 150 ft.

CHOTEAU—Northern State Oil Co.'s Woodward 1, sw 20-14n-24e, resm 6-inch to s.o.w., 2845 ft. Melton Corp., 24-21n-17e, td 2850 ft. Powman Oil Co., 24-19-11e, to res 200 ft. Williston Shelby O&G Co., Flack 1, ne 12-28-11, fresh water at 2890 ft.

GLACIER—Fulton Pete Corp.'s Blackfoot 1, ne 28-36n-12w, co to bottom at 1240 ft. B&H Oil Co.'s Haines 1, se 2-34-6w, sd 2762 ft. Jeffries-Hoerr's Dawson 1, ne 7-31-12w, dr 2900 ft.

GOLDEN VALLEY—Texas-Pacific's 1, sw 21-8s-21e, dr bel 3750 ft. J. F. Dealey et al's 1, ne 28-5n-22e, to res.

LIBERTY—Northland O&G Co.'s Yurman 1, 32-33-5e, resum 3475 ft. Sunburst, McLaren 1, se 9-37-6e, sd 3115 ft. C. G. Howard, Schoonover 1, nw 18-36-6e, rigging up. Perkins, Brown 1, ne 24-35-4e, bldg rig.

ROSEBUD—Prairie O&G Co. 1-X, 26-10-39e, cem 12½-inch at 2415 ft for wso.

TETON—Andover Oil Co.'s Carlson 1, 5-24-4w, stand 150 ft.

TOOLE—Liquid Gold Oil Co.'s Robert 1, ne 25-36-12, bldg rig, td 2150 ft. International Roy. Hold. Co.'s Henry 1, sw 26-35-36, sd 2650 ft. A-1 Pete Co., se 24-36-1e, sd 1555 ft.

YELLOWSTONE—Peter Antonioli, 21-2n-25e, dr bel 1200 ft.

NEW MEXICO

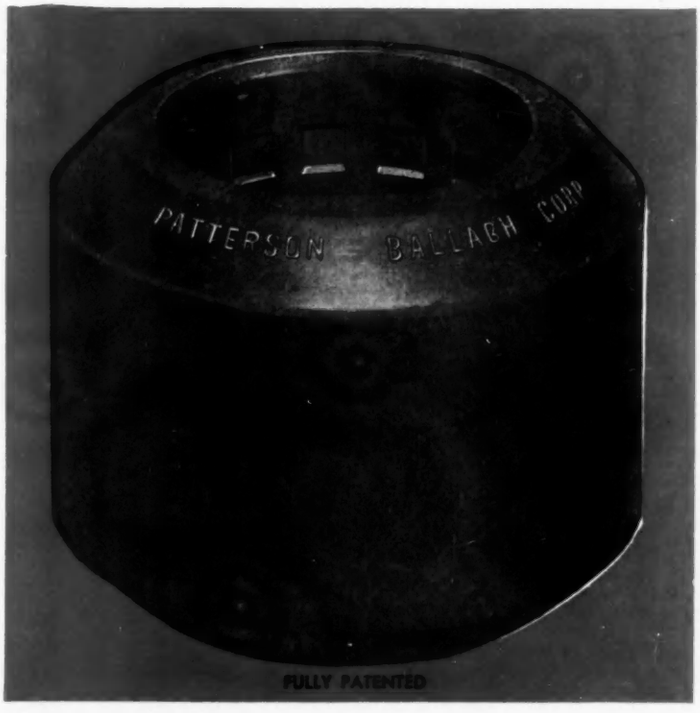
CHAVES—Warman Oil Trust, Siebert 1, ne 27-13-24, dr 2221 ft. Neal et al, Russell 1, nw 21-14s-25e, dr 1800 ft.

DE BACA—Matador Oil Co.'s Wood 1, se 6-4n-20e, cas at 3010 ft.

HARDING—Milwaukee Synd., Kerlin 1, se 34-21n-30e, dr at 464 ft.

LUNA—Angelus Oil Mining Ass'n 1, se 20-21s-10w, dr 6085 ft.

McKINLEY—J. W. Halsell's Santa Fe 1, 17-



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We have actual instances where rotary drilling brake band linings were being replaced every week. After installing Bettis Protectors they were not replaced again during the drilling of the well. Weight indicator tests show as much as ten tons taken off the lines going in, due to the floating effect, and as much as eight tons coming out, due to relief of friction. One user advises—"Before installing Bettis Protectors it was almost impossible to hold the drill pipe when going into the hole. The brake got so hot we could not stand close to it. After installing Bettis Protectors we could stop the pipe anywhere and took ten tons off the weight going into the hole."

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"Best bet yet"

18-9w, sd 3255 ft. Wms et al, A.T.S.F. 1, se 19-18n-8s, stand 1900 ft. United Kern Pete, Inc., 1, sw 1-18n-11w, lcn. Dysart et al, Dysart 2, ne 14-14n-10w, dr 1455 ft.

MORA — Santa Fe Diox-Ice Co.'s Wagon Hound 1, ne 14-19-21, dr 90 ft.

OTERO—Ernest et al's 1, se 20-25s-7e, wtg for equip. at 1328 ft.

RIO ARRIBA—Berrenger et al's Hartman 1, ne 8-29n-7w, sd 825 ft. San Juan Pete Co.'s Gov't 1, se 14-30n-7w, sd 250 ft. Governador Oil Co.'s 1, se 12-29n-7w, carry 8¼-inch at 871 ft.

SAN JUAN—Dorothy Oil Co.'s Terwilliger 2, 29-30-9w, stand 1750 ft. Kutz Canon O&G Co.'s Day 1, se 20-28n-10w, dr 2420 ft. Childers Dr. & Pr. Co.'s Westwater 2, 23-31-16w, sd, water trouble at 2490 ft. Rio Grande Dev. Co.'s 2, 9-29-11, ur 6⅝-inch to 1380 ft. Continental Oil Co.'s Rattlesnake 24, 1-29n-19w, prep to sdtr dr pipe, td 4730 ft. J. B. Witt O&G Co., Mangum 1, se 33-29n-11w, lcn. San Juan Leaseholds, Bowman 3, ne 30-30-15, dr 2661 ft. Reserve Oil Co., Reserve 3, 36-22n-14w, dr 715 ft. R. C. Oswell et al, nw 34-30n-11w, ready to spud. Murchison Oil Co., Angels Peak 6, se 34-29n-11w, prep to res at 1730 ft.

SAN MIGUEL—Pioneer O&G Co.'s Thunderbird 1, nw 14-15n-16e, wait 2340 ft. Starr Oil Co.'s Adams 1, ne 25-17n-16e, dr 3440 ft. Cibola Pete Co.'s Crown 1, se 9-13n-14e, sd 840 ft. Hershfield Dev. Co.'s Cabra Springs 1, ne 12-12n-22e, prep to res 1415 ft. Con-O-Kul Oil Co., Cherryvale 1, ne 34-17n-21e, fsh 455 ft.

TORRANCE—Wms. et al's Staplin 1, ne 16-8n-10e, prep to res 1643 ft. J. B. Witt O&G Co.'s Kutchem 1, 12-7-7e, dr 1446 ft.

VALENCIA — Acme Oil Co.'s N. M.-Ariz. Land Co.'s 1, ur to 4958 ft. Harlan et al., Harlan 1-A, 5-6n-2e, prep to resume 6140 ft.

COLORADO

ADAMS—N. M. Slatt's 1, se 27-26-64w, dr 2685 ft.

ARAPAHOE—McDebb Dr. Co.'s Fitzsimons 1, 7-45-55, dr 5772 ft. Merrett et al, U. P. 1, nw 17-5-65, stand 1600 ft, hfw.

BACA—A. R. Jones Oil & Optg. Co., Boice Cattle 1, 22-34-42w, stand 4760 ft.

EL PASO — Utemore Synd., Cannon 1, ne 10-16s-66w, prep to res 1125 ft.

GRAND—Oil Mineral Lands, Inc., McElroy 1, sw 14-2n-81w, dr 110 ft.

HUERFANO—Parker Club, Fee 1, se 4-28s-68w, sdtr 5 3/16-inch cas, td 4116 ft.

JEFFERSON—Ruby Hill O&G Co.'s Braden 1, se 24-4s-69w, dr 3885 ft.

LAS ANIMAS—Oklahoma Dr. Ass'n, Radcliffe 1, ne 28-28-52, sd 100 ft.

LA PLATA—McGarr Pete Co.'s Pinon Mesa 1, ne 34-33n-12, lcn. Klem Pete Corp.'s Olbert 1, se 9-25n-12w, stand 3125 ft. Murchison Oil Co., Doescher 1, nw 29-33n-12, sd 1225 ft.

LINCOLN—Eastern Colo. Oil Corp.'s State 1, 36-14n-57w, ur to 3450 ft.

MOFFAT—Mtn. Fuel Supply's State 2, tract 37-12-100, co 2202 ft. S. H. Keoughan et al's State 1, sw 16-4n-101w, sd 2960 ft.

MONTEZUMA—G. H. Talcott et al, McElmo 1, 7-35n-16w, dr 425 ft.

MONTROSE — Uncompahgre O&G Co.'s Colo. Title & Trust 1, 27-50n-10w, install boiler, td 57 ft.

MORGAN—Ind. Terr. Illum. Oil Co.'s State 1, ne 16-1n-57w, co 4090 ft.

PUEBLO—Anchor Oil Co.'s Easley 1, sw 35-22s-57w, wtg cas 520 ft.

PARK—So. Park Oil Co.'s Milligan 1, se 13-9s-76w, dr 1821 ft. So. Park O&G Co.'s Easche 1, ne 6-9s-76w, sd.

RIO BLANCO—California Co., Raden 1, se 30-2n-102w, lcn.

ROUTT—Ingersoll et al's Omholt 1, 29-4n-87w, sd 115 ft.

WASHINGTON—Middlemist Oil Co.'s Middlemist 1, se 14-4-56, stand 1510 ft.

KANSAS

MORTON COUNTY — Hydraulic Oil Co., State land 1, nw se, 22-34-43w, sd 3460 ft.

STEVENS COUNTY—Sidwell et al, Kelly 1, sw ne 16-34-38w, (owd) td 2651 ft, co.

COWLEY COUNTY—Fisher et al, Hunt 1, sw se se 11-34-3e, ru and sd. Tom Fine, Boyd 1, nw ne, 32-32-4e, 12-inch 1265 ft, Big L. 3143 ft, 3137-43 ft pump 25 bbls, td 3163 ft, comp. Roth and Farrout, Reidy 1, c sw nw ne, 8-32-4e, sd 1040 ft.

HARPER COUNTY—Beeler et al, Bear 1, c ne, 2-31-6w, td 1830 ft sd.

FORD COUNTY—Carter et al, Community-Everett 18, c ne, 22-29-21w, (6000 ft test), td 667 ft, cemtg 15-inch at 545 ft.

SEDGWICK COUNTY — Buck et al, McNanaman 1, c ne nw nw 2-20-1e, dr 2225 ft.

FORD COUNTY—Swain et al, Kenthorn 1, c nw, 21-25-24w, 5-inch 4600 ft, dr 4700 ft.

STAFFORD COUNTY — Rosenthal, Stanolind & Amerada, Gray 1, c ne, 11-24-13w, ru.

RENO COUNTY — Shell & Continental, Blake 1, sw se se, 23-23-4w, dr 2370 ft.

HARVEY COUNTY—Empire & Shell, Showalter 1, nw se, 23-23-2w, dr 2900 ft, 8-inch 2730 ft.

MARION COUNTY—Maidwell, La Master 1, nw c, 31-22-4e, sd 650 ft.

COFFEY COUNTY—Hegberg et al, Kroft 1, se sw se, 30-22-14e, 10-inch 818 ft, td 1300 ft, sd. Roberts et al, Hay 1, sw se nw 32-22-15e, td 1250 ft sd.

BARTON COUNTY—McCool et al, Tsern 1, c sw se ne 12-20-11w, td 1600 ft.

RICE COUNTY—Cress et al, Sharp se ne, 13-20-10w, 6-inch 3140 ft, T. sil. L. 3330 ft, td 3336 ft, hfo, sd for tanks.

RUSH COUNTY—Dewey & Mitchell, Greenwalt 1, c sw, 17-19-16w, sd 1700 ft.

RICE COUNTY—Skelton Oil, Ott 1, c se se, 16-19-14w, sd 2065 ft. Deitrick & Langston Purcell 1, nw c, 33-19-9w, rig.

McPHERSON COUNTY — Henderson & Holden, Sommerfield 1, c ne sw, 23-19-1w, 6-inch 3247 ft, td 3308 ft, csg trbl.

LYON COUNTY—Griffith et al, King 1, nw c, 8-19-10w, T. Big L. 2230 ft; 6-inch 2277 ft, 2315 ft hfw, td 3695 ft, dry and abn.

BARTON COUNTY—Syndicate Oil, Boertz 1, c nw se ne, 13-18-12w, td 1954 ft, sd for 10-inch.

RICE COUNTY — Allison & Fitzwilliams, Blake 1, ne nw, 9-18-10w, rig. McFadden & Shell, Jennings 1, c sw ne nw 29-18-6w, pb to 1130 ft.

NESS COUNTY—Gypsy, Coleman 1, c sw ne, 25-17-25w, 8-inch 3860 ft, 6-inch 4158 ft, sd 4268 ft.

ELLSWORTH COUNTY—Aylward et al, Stratman 1, c se nw se, 1-17-10w, sil. 1, 3265 ft, so. rng liner, td 3260 ft, hfo, sd for tankage. Gilmore Oil Co. et al, Sturn 1, nw sw, 31-17-9w, td 2445 ft, ur 10-inch.

MORRIS COUNTY — Urschell et al, Bersuch 1, c nw se nw, 10-17-7e, ru sd.

ELLSWORTH COUNTY — Alladin et al, Stoddenberg 1, c sw, 22-15-10w, sd 1130 ft.

SALINE COUNTY—Stanolind et al, Martin Community 1, ne se se, 3-16-3w, dr 525 ft.

MORRIS COUNTY—Hankenson et al, Cessnum 1, sw se 24-16-9e, sd 900 ft.

FRANKLIN COUNTY—Fields et al, Usher 1, se c 35-16-17e, sd 400 ft.

RUSSELL COUNTY—Hall et al, Mills 1, se sw se, 30-14-13w, sd 700 ft.

ELLSWORTH COUNTY — Milton et al, Kaster 1, se ne, 6-14-9w, td 1740 ft, fsh tools. Hershey et al, Schaltz 1, c ne, 9-14-8w, sd 400 ft.

OSAGE COUNTY—Riggs-Smith, Wood 1, c se nw, 31-14-15e, 10-inch 1050 ft, sd.

RUSSELL COUNTY — Austin Drlg. Co., Rockefeller 1, se c 6-13-12w, 3320-25 ft hfw, td 3374 ft.

SALINE COUNTY—Twin Mounds Oil Co., Weis 1, c w½ ne nw, 30-13-4w (owd), 19-in 1010 ft, sd 2710 ft.

DICKINSON COUNTY—Severs et al, Livingood 1, ne sw 13-13-2e, sd 3850 ft.

RUSSELL COUNTY—Gilbreath et al, Bratton 1, c ne, 33-11-13w, 8-inch 2485 ft, td 2814 ft, sd.

GRAHAM COUNTY — Schleimeyer et al, Clark 1, c sw ne ne, 11-9-25w, rng 8-inch 3715 ft, 6-inch 3848 ft, td 4040 ft, ur 10-inch.

CLAY COUNTY—Nebraska Oil, Tivier 1, sw c 19-8-9e, sd 2390 ft.

SHERIDAN COUNTY — Flo et al, Shoemaker 1, se sw sw, 27-7-26w, sd 900 ft.

ROOKS COUNTY—Empire, Holsman 1, c sw ne se, 17-7-20w, dr 2400 ft.

WASHINGTON COUNTY—Simcox, Penwell 1, nw se ne, 16-3-3e, sd 1720 ft.

RAWLINS COUNTY—Danciger et al, Unknown 1, sw c 3-2-35w, sd 2700 ft.

OKLAHOMA

ALFALFA COUNTY—T 27n, R 11w, Sec. 12, Smith Bros., Forbes 1, ne c se nw nw, sd 1420 ft.

KAY COUNTY—T 27n, R 2s, Sec. 9, Mummer et al, Sornick 1, nw c se, hfw 2070-2170 ft, sd 2700 ft. T 26n, R 1w, Sec. 32, Boucher et al, Jefferson 1, ne c sw, dr 3502 ft.

HARPER COUNTY—T 25n, R 20w, Sec. 12, Empire, Bruce 1, sw c ne ne sw, td 7935 ft, shot, no results, will plug.

GRANT COUNTY—T 25n, R 4w, Sec. 22, Cowden, Collmer 2, ne c se ne sw, sd 5640 ft, tools lost.

ALFALFA COUNTY—T 24n, R 11w, Sec. 14, J. V. Bailey et al, Acre 1, c sw ne, show gas 5298-5303 ft, dr 5330 ft.

GARFIELD COUNTY—T 24n, R 6w, Sec. 9, Pulse & Beamer, White 1, se c nw, sd 5850 ft.

NOBLE COUNTY—T 21n, R 1e, Sec. 12, Barnsdall et al, Miksch 1, nw c, sw, hfw 4923-26 ft, will plug.

BLANE COUNTY—T 19n, R 10w, Sec. 13, Washoma, Phillips 1, c nw sw, sd 4600 ft.

LOGAN COUNTY—T 18n, R 3w, Sec. 33, Healey et al, Quier 1, se c sw, sd 3970 ft.

KAY COUNTY—T 28n, R 3e, Sec. 24, Summitt Drlg. Co. et al, Hays 1, nw ne nw, sd 1950 ft.

OSAGE COUNTY—T 28n, R 7e, Sec. 4, L. G. Stanley et al, 1, se c sw, sd 1920 ft.

PAWNEE COUNTY—T 23n, R 5e, Sec. 15, Cochran et al, McFadden 1, ne c sw, rig. T 22n, R 5e, Sec. 2, Sherry et al, Milsap 1, se c sw, sd 1750 ft. T 20n, R 5e, Sec. 6, W. A. Rookstool, Berry 1, nw ne sw, sd 1951 ft show gas.

LINCOLN COUNTY—T 13n, R 6e, Sec. 8, Atlantic, Beebee 1, sw ne sw, lcn.

OKFUSKEE COUNTY—T 12n, R 10e, Sec. 3, Shepperd et al, Shepperd 1, se nw sw, sd 3690 ft.

PITTSBURG COUNTY—T 9n, R 16e, Sec. 32, Pattison et al, McDuff 1, sw nw se, fsg tools 5687. T 8n, R 14e, Sec. 14, C. O. Canady et al, Smith 1, sw c ne nw nw, rig and tools. T 7n, R 14e, Sec. 5, C. O. Canady et al, Travis 1, c sw ne, rig. T 6n, R 15e, Sec. 7, Perrine et al, Ringling 1, nw c ne, sd 1080 ft.

LATIMER COUNTY—T 6n, R 18e, Sec. 4, Choctaw Gas Co., Weaver 1, c ne nw, dr 2630 ft. T 6n, R 19e, Sec. 16, P. English et al, Weaver 1, c nw se, sd 300 ft.

ATOKA COUNTY—T 1n, R 15e, Sec. 9, Edgerton et al, Rolland 1, c nw, sd 700 ft.

OKLAHOMA COUNTY—T 12n, R 4w, Sec. 17, C. F. Cuniff, Trustee, St. Joseph 1, sw c ne sw se, sd 6700 ft.

SEMINOLE COUNTY—T 10n, R 6e, Sec. 19, Bunte et al, Bruner 1, se c nw, rig.

ROGER MILLS COUNTY—T 12n, R 24w, Sec. 23, Ute Oil Co. et al, Williams 1, c sw, cmtg cave 3658 ft. T 11n, R 26w, Sec. 4, J. J. Rook et al, Davis 1, c nw ne (owd) sd 2956 ft.

CANADIAN COUNTY—T 10n, R 6w, Sec. 1, J. V. Bailey, Robinson 1, c ne nw, sd 150 ft.

WASHITA COUNTY—T 8n, R 19w, Sec. 29, Snodgrass et al, Blocker 1, nw c, dr 1665 ft. T 8n, R 18w, Sec. 21, Burns & Prince, Dock 1, sw c, sd 150 ft.

GREER COUNTY—T 7n, R 22w, Sec. 1, Roy Good et al, Cliffell 1, nw c, sand 1462-1501 ft sd 1615 ft. T 7n, R 21w, Sec. 23, H. A. French et al, Murphy 1, sw nw se, co 1500 ft.

STEPHENS COUNTY—Sec. 25, Ross Southard, McKinley 1, ne c, sd 1063 ft.

HUGHES COUNTY—T 5n, R 11e, Sec. 15, J. J. Wright, Roberts 1, se c sw, ¶2 915-18 ft, sd 1645 ft.

GARVIN COUNTY—T 2n, R 2w, Sec. 24, Malernee Oil Co., Phillips 1, ne c, sw, rig.

COAL COUNTY—T 2n, R 8e, Sec. 10, Whitney et al, Miller 1, se c ne, (owd) sd 760 ft. T 1n, R 8e, Sec. 35, W. E. McGraw, Stiring 1, ne c se, dr 750 ft.

ATOKA COUNTY—T 3s, R 10e, Sec. 18, Brookshire et al, Guinn 1, nw c, show gas 360-72 ft sd 500 ft.

CARTER COUNTY—T 4s, R 2e, Sec. 32, Tex-Okla. Drlg. Co., Anderson 1, se ne se, td 2806 ft d&a.

BRYAN COUNTY—T 6s, R 7e, Sec. 14, W. A. Johnson, Ussery 1, se c, sd 325 ft. T 7s R 10e, Sec. 8, Bryan Oil Co., Childs 1, ne se sw, sd 660 ft.

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NAME_____ COMPANY_____ ADDRESS_____

NORTH LOUISIANA

Company, Well and Location	Initial Production Bbls.	Depth
BOSSIER PARISH—		
R. O. Roy, W. H. Hodges 1, 19-16-10	*	2720
CADDO PARISH—		
Pyramid O&G Co., Wheeler 1, 9-18-16	*	2810
CONCORDIA PARISH—		
Fred Stovall, Grasmere 1, 23-8n-10e	*	1647
SABINE PARISH (Zwolle)—		
Ohio Oil Co., Bowman-Hicks 7, 2-7-12	50	2387

BIENVILLE PARISH—Jamestown Synd.'s Lawhon 1, sw ne 15-16-8w, show gas in sandy shale (Tokio), cemtd 6-in 2845 ft, fsh cas, td 2854 ft.

BOSSIER PARISH — Andrews & Davlin's Nattin 1, 15-22-14, dry 2062-67 ft, dr shale 2700 ft. H. I. Morgan et al's Kendricks B-13, ne sw 22-19-11, 10-in 176 ft, tested est 25 mil ft gas in ds test, arr set 6⅝ cas 1725 ft, td 1764 ft (second hole). Rambaugh et al's Allison 1, 10-19-13, sd 1100 ft. R. O. Roy's W. H. Hodges 1, ne ne 19-16-10, tested sw show oil 2620 ft, sw, abn in limey shale, td 2720 ft, 12½ cas 140 ft. Walker et al's Thompson 1, 22-22-14, materials.

CADDO PARISH—United Gas Pub. Serv. Corp.'s Emmons 1, ne sw 27-23-16, 12½ cas 363 ft, 9-in 3635 ft, setting 6⅝ cas 5396 ft; Fortner 1, nwc frac sec 5-22-16, 5-in 5430 ft, td 5435 ft. Gordon M. Garry's Hatcher 1, nw ne 11-17-15, lcn (5500 ft test planned). Pyramid O&G Co.'s Wheeler 1, se sw 9-18-16, 10-in 450 ft, 6⅝ 2779 ft, sand 2779-85 ft, dry abn, td 2810 ft. Ralph Davidson et al's F. Weiller 1, 33-17-13, 10-in 40 ft, base Blossom 1997 ft, dry 2440-71 ft, tested hot sw 2440-47 ft, sr td 2471 ft. Pelican Nat. Gas Co.'s Cooper 1, 29-18-14 (5500 ft test), dk and mov in rig.

CATAHOULA PARISH—National Drilling Co.'s Marsh McMillian 1, 26-9-6e, 6⅝ cas 2796 ft, tested sw sd 3097 ft.

CALDWELL PARISH—Hudson et al's Burton 1, 36-12-2e, co td 2621 ft. Carter Bell et al's Taylor 1, 42-14-4e, rig.

CLAIBORNE PARISH—Baird Bros. et al's Whittaker 1, 30-20-7w, dr sandy shale 2915 ft.

CONCORDIA PARISH — Fred Stovall's Grasmere 1, 23-8n-10e, 8-inch 152 ft, dry 1025-1100 ft, sw 1608-42 ft, sw abn, td 1647 ft. United Gas Pub. Serv. Corp.'s Miller & Smith 1, 33-8-9e, lcn. Joe Marr et al's Maxwell 1, 38-3-8e, sd 3622 ft.

DE SOTO PARISH — W. H. Weichert's H. Smith 1, 31-14-15, top gas sand 1653 ft, top chalk 1901 ft, sd 2350 ft. Neff et al's Ramsey 1, 33-13-16, 12½ cas 80 ft, bit lost in hole, sd 3000 ft. E. T. Oakes' Bryant 1, 30-13-15, lcn.

NATCHITOCHES PARISH—C. M. Talley et al's Talley 1, 29-11-10, dry show oil in bro sand and shale 1256-69 ft, dr 1308 ft. W. M. Coates et al's Collins 1, sw nw ne 28-9-10, base Midway chalk 2612 ft, base hd lime 4039 ft, tested 15 joints mud and sw 4020-91 ft, ta td 4091 ft. J. W. Cooper et al's Cooper 1, 35-11-10, dr 3106 ft; Cooper 2-A, top chalk 1400 ft, sd 1515 ft.

RED RIVER PARISH—Lucky Strike Oil Co.'s Chaffraix 1, 33-12-10, junk in hole, ta td 3010 ft.

SABINE PARISH—J. C. Walton's Sabine 1, ne nw 11-7-12, 6⅝ cas 2119 ft, dry small show oil 2327 ft, sd 2360 ft. Lacey Pet. Co.'s Cooper 1, 30-8-11, top chalk 2306 ft, 6⅝ cas 2270 ft, hfo wosr, td 2620 ft; Cooper 3, sw ne 30-8-11, sp dr 1500 ft. Trans-America Oil Co.'s Carter 1, 36-8-12, top marl 2311 ft, 6-in 2211 ft, 700 ft oil in hole, wosr td 2540 ft. Jean Longoria's Belton 1, 31-9-13, sd 1400 ft. Triangle Pet. Co.'s Sabine 2, 36-8-12, dk. D. M. Lide's Ponder 1, 15-7-11, top marl 2393 ft, top chalk 2407 ft, 6-in 2385 ft, hfo wosr, td 2800 ft; Ponder 2, ne nw 15-7-11, 10-in 102 ft, 6⅝ cas 2364 ft, show oil 2420 ft, arr deepen. Jno. Woodley's Sabine 1, ne se 12-8-12, 10-in 103 ft, 6⅝ 2310 ft. H. W. Perritt's Bowman-Hicks 3, 2-7-12, 6⅝ 2206 ft, hf fluid, wosr, td 2293 ft; Bowman-Hicks 4, se ne 2-7-12, lcn; Boring 1, ne nw 11-7-12, rig. A. H. Thomas's Edwards Est. 1, ne se 8-8-13, rig. R. L. Gay, Tr.'s, Long-Bell Lbr. Co. A-1, ne nw 10-8-13, sp 12½ cas 105 ft. Jordan & Co., Inc.'s, La. Long Leaf 1, sw se 3-7-11, 10-in 100 ft, dr 1450 ft. Gautier et al's Meshell 1, se nw 30-8-12, dr 1200 ft (second hole). Ohio Oil Co.'s Bowman-Hicks 7, ne ne 2-7-12, 10-in 100 ft, 6 cas 2215 ft, flowing by heads 50 bbls oil day, td 2387 ft; Bowman-Hicks 8, nw ne 2-7-12, rig; Bowman-Hicks 9, nw se 35-8-12, lcn; Bowman-Hicks 10, sw ne 35-8-12, lcn; Bowman-Hicks 11, sw ne 2-7-12, lcn. Durham Oil Co.'s Polly 1, sw ne 18-8-12, 10-in 105 ft, 8¼ cas 2087 ft, dr 2550 ft. Packard Oil Co.'s Davis 1, elev 337 ft, sw sw 8-7-10, 10-in 80 ft, dr 2600 ft. W. M. Coates' Sabine 2, 2-7-12, 10-in 100 ft, 6⅝ 2207 ft, dry sd 2495 ft; Sabine 3, 1-7-12, 10-in 103 ft, sd 760 ft. Sabine Royalties Co., Inc.'s, Bill Hill 1, nw ne ne 5-7-11, sp 10-in 105 ft, dr 600 ft. Diffie & Barrett's Lites 1, 34-8-11, 10-105 ft, sd. Natural Gas Prod. Co.'s Sabine 1, 1-7-12, lcn; Sabine 2, 1-7-12, dk.

TENSAS PARISH—Seip et al's Fowler 1, 10-10-10e, co to deepen, td 905 ft. A. R. Willis' Curry 1, 39-11-12, dr 3430 ft.

VERNON PARISH — Smith Weir et al's Delta L&T Co. 1, ne ne 14-2n-11w, rig.

WEBSTER PARISH—D. M. Coyle's Frazier 1, ne se 27-23-11, dk. Cassidy & Davis' Nickerson 1, ne sw 29-23-10, sd 160 ft. Red Hawk Oil Co.'s Matthews 1, se nw 11-13-9, top chalk 2480 ft, sd in lime 2518 ft.

ARKANSAS

CHICOT COUNTY—H. R. Smith's Lytle 1, 31-18-3, cemtd back to 2865 ft, ta old td 2925 ft.

CLAY COUNTY—S. C. Jeffus, Tr.'s Underwood 1, nw ne 4-20-8e, sd cur title 1214 ft.

CLEBURNE COUNTY—Donnell et al's Fee 1, 33-11-9, sd 3740 ft.

DALLAS COUNTY—Jno. James, Tr.'s Fordyce Lbr. Co. 1, ne nw 11-9s-15w, 10-in 176 ft, coring black gumbo 2398 ft. E. C. Brewer, Tr.'s Hillman 1, se ne 20-10-13, 10-in 138 ft, dry in sandy lime and sand 2628-48 ft, coring sand and shale 2748 ft.

GARLAND COUNTY—H. H. Given's Garrett 1, 1-3n-19w, cas pulled hfsw ta 3756 ft.

GRANT COUNTY—Spann & McClung's Sarah Page 1, sw nw 3-3-12, sd wo drill line 464 ft.

HOT SPRINGS COUNTY—John Watkins, Tr.'s Cunningham 1, 11-5-16, sd wo drill stem 220 ft.

JOHNSON COUNTY—Blackwell O&G Co.'s Wyver 1, 21-8-23, ta 5600 ft.

LA FAYETTE COUNTY—Crawford Drilling Co.'s Vaughan 1, 25-19-25, rig. McIver et al's Hattle 1, nw ne 1-20-26, 12½ cas 115 ft. sand 2520 ft. Smitherman & McDonald's Bodcaw 1, se nw nw 16-15-22, 12½ cas 42 ft, 8¼ cas 1176 ft, cored oil sand 1194-98 ft, sd wo td 1198 ft.

LAWRENCE COUNTY — Marguerite Dev. Co.'s Broadway 1, 31-17-1, sd 45 ft.

LITTLE RIVER COUNTY—Fay Roberts Oil Co.'s Russell 1, nw nw 25-12-29, lcn.

LOGAN COUNTY—M. W. Greesom's Parks 1, 21-8-24, sd 1309 ft. J. H. Flowers' White 1, 13-5-26, sd 3610 ft.

MADISON COUNTY—J. W. Baxter's Hallem 2, cent. sec. 17-16-26, sd 405 ft. Hallem 3, ne sw 1-17-26, sd 42 ft.

MILLER COUNTY—E. & F. Oil Co.'s E. L. Beck 1, 36-15-26, 6⅝ cas 2792 ft 4½ cas 2957 ft, tested sw 2961 ft, sd 2968 ft. Bullock Oil Co.'s Hervey 1, 2-15-26, ta with junk in hole td 2832 ft. East Texas O&G Co.'s Hervey 1, 2-15-26, ta 890 ft. Gusher Bend Oil Co.'s Adams 1, nw nw 24-14-26, 10-in 115 ft, coring 2634 ft. O'Mara et al's Person 1, 31-15-25, lcn. Fitzwater et al's Beck 1, sw se 33-15-26, 10-in 85 ft, sd. J. D. McRae's Smith 1, nw se 28-15-26, dk.

OUACHITA COUNTY — Belmont et al's Dean 1, 16-15-17, top red beds 2765 ft, sd junk in hole 2907 ft. Copenhaver et al's Elliott 1, se se 11-15-17, 6-in 2185 ft, td 2190 ft. Wesson & Bonner's Wesson 1, sw nw 22-15-19, 6⅝ cas 2083 ft, wo power to pump 300 ft fluid in hole td 2169 ft. J. D. Reynolds' Grayson 1, 21-15-19, 10-in 42 ft. Nacatosh 1502-14 ft, cored sand 2175-90 ft, 6-in 2151 ft td 2197 ft.

PIKE COUNTY—Henderson et al's Tilyou 1, 26-8-24, show heavy oil 567 ft, dr lime rock 2555 ft. E. R. Henderson's Lee 1, sw se 31-8s-24w, dk.

POPE COUNTY—Ark. La. P. L. Co.'s McFadden & Brooks 2, ne nw 15-9-21, 13⅜ cas 1900 ft, tested 1 mil ft gas 3285 ft 8⅝ cas 3415 ft, 8-in 3451 ft, ur 5 3/16 cas td 4145 ft. Baird 1, se nw 11-7n-20w, 10-in 1168 ft, arr run 8-in td 2700 ft.

SCOTT COUNTY — Heavener O&G Co.'s Reser 1, 36-4-26, sd 1536 ft. Waldron O&G Co.'s J. G. White 1, sw nw 17-3n-29w, 10-in 225 ft, sd 1475 ft (sec. hole).

SEBASTIAN COUNTY—M. W. Greesom's Spears 1, 9-7-29w, sd after testing sw 2515 ft. Ozark Nat. Gas Co.'s A. B. Bryant 1, se ne 28-8n-29w, sp dr 279 ft.

UNION COUNTY—Hickman et al's Hogg 1, 35-16-17, top Graves sand 2351 ft top red beds 2779 ft sd in shale 3328 ft. Rice et al's Whatley 1, 7-17-15, sd 2186 ft. Southern Prod. Co.'s Wingfield 1, se nw 16-19-15, 10-in 103 ft, sd 2608 ft. Wilson & Chapman's Hadley 1, ne sw 3-18-13, 10-in 102 ft top Nacatosh 2300 ft Meekin sand 2550 ft, top red beds 2933 ft, sd 600 ft fluid in hole 30 per cent sw td 3570 ft.

WASHINGTON COUNTY — Taylor et al's Runny 1, 1-13-29, sd 1702 ft. Lincoln Lease Holding Synd's Townsite 1, 30-15-32, ta 1500 ft. C. H. Willoughby's Jones 1, 34-16-30, sd 2150 ft. O'Hara & Shetterley's Boyd 1, 12-16-32, ta 850 ft. Delbert Graves' Cunningham 1, 14-15-32, sd in gray sand 602 ft.

VAN BUREN COUNTY — J. S. Martin's Scanland 1, 5-9-13, sd 50 ft.

YELL COUNTY — T. Luckett's Balcon 1, 36-7-12, sd while fsh cas td 5710 ft.

MISSISSIPPI

Company, Well and Location	Initial Production Bbls.	Depth
GRENADA COUNTY—		
Carter Oil Co. et al, Dubard 1, 18-22-4e	*	4012
WARREN COUNTY, (Vicksburg Dist.)—		
Dixie Pet Co., Clark 1, 6-16n-5e	*	3090

CLARKE COUNTY, (Quitman Dist.)—Gulf Ref. Co.'s Box 1, nw se 11-2n-15e, elev 221 ft 15½ cas 105 ft 10-in 922 ft, top Midway black shale 2205 ft, top Selma chalk 2635 ft dr hard chalk 3115 ft.

CLAY COUNTY — Ohio Oil Co.'s Cantrell 1, ne ne 16-15-5e, elev 270 ft 13⅜ cas 1389 ft, 9⅝ cas 2929 ft, dr soft shale strks sand and slate 3090 ft.

CHICKASAW COUNTY — Hightower & Golsan's Fleming 1, 20-13s-3e, wo 6-in cas td 1505 ft (corrected depth).

GRENADA COUNTY—Carter Oil Co. et al's Dubard 1, nw nw 18-22-4e, top Selma chalk 1787 ft, top Eutaw 2612 ft, dry abn in red shale td 4012 ft.

JASPER COUNTY, (Bay Springs Dist.)—Bay Springs Pet. Inc.'s J. H. Keyes 1, nw ne 21-2n-10e, 15½ cas 104 ft, sd wo fuel td 802 ft.

LA FAYETTE COUNTY—F. E. West et al's May 1, 22-10s-4w, rig.

MONROE COUNTY, (Amory Dist.) — Amory Dev. Co.'s Bourland 1, sw ne 2-15-19, sd in brown sand 3007 ft. P. J. McAlpine's Cowart 1, ne sw 2-12-19, 10-in 694 ft, 8¼ cas 1276 ft, fsh td 1830 ft. Associated Royalties' School Board 1, sw se 16-15-17, sd 60 ft. Amory Pet. Corp.'s Harris 1, nw nw 18-13s-17w, elev 455 ft, 10-in top Paleozoic rock 478 ft, top gas sand 2324 ft, 6-in 2324 ft, tested dry 2350, 2356 ft and 2372 ft, shut valve attempt to build up gas pressure td 2372 ft.

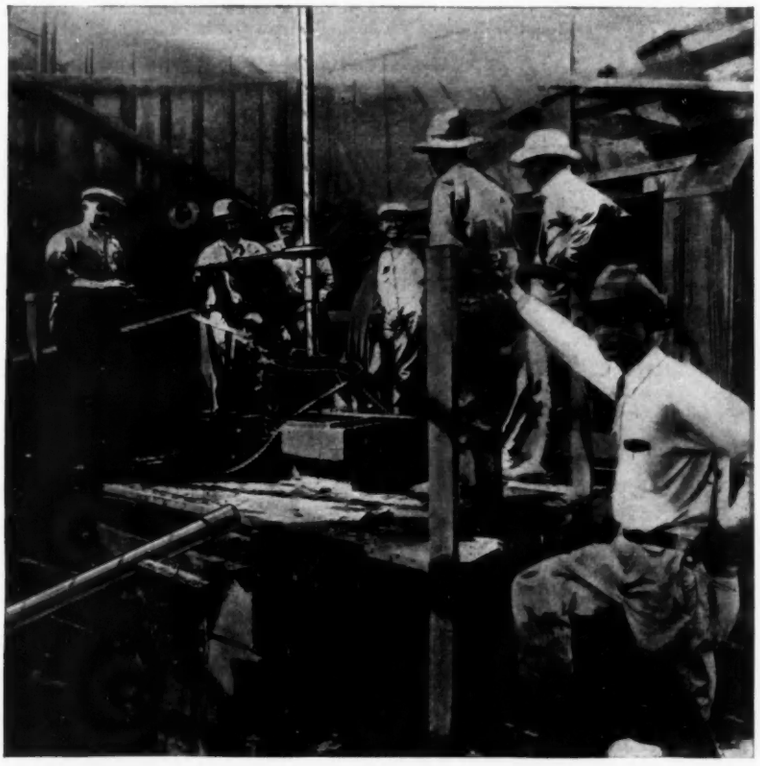
RANKIN COUNTY, (Jackson Dist.)—Love et al's Muse 1, se se 32-7-4e, 12½ cas 600 ft dr Wilcox 2501 ft. Love Pet. Co.'s Moore 1, se nw 28-6-2e, sd 900 ft. Millstein O&G Co.'s Gammill-Hartfield 1, sw ne 6-5-2e, hf fluid sd wo 2500 ft. Atkisson et al's Valentour 1, nw nw 18-5-2e, dk.

SMITH COUNTY, (Raleigh Dist.)—Pocahontas Nat. Gas Co.'s Adams Bank Lbr. Co. 1, ne sw sw 10-3n-7e, elev 425 ft, 10-in 441 ft tested 90 ft fresh water thru ds in 8 minutes in Wilcox 2732-38 ft coring 2941 ft.

WARREN COUNTY, (Vicksburg Dist.)—Eagle Lake O&G Co.'s Kiger 1, 9-18n-2e, dk. Dixie Pet. Co.'s Clark 1, nw nw 6-16n-5e, elev. 278 ft, 12½ cas 77 ft, 8¼ cas 2186 ft dry in Sparta 2248 ft, dry abn in chalky shale td 3090 ft. Vicksburg O&G Co.'s Dornbusch 1, sw ne 8-18n-5e, sd 1600 ft.

WINSTON COUNTY, (Louisville Dist.)—Miss. Drilling Co.'s Scarbrough 1, nw nw 15-13n-14e, washing to bot td in red gumbo and shale 2549 ft.

YALABOUSHA COUNTY, (Water Valley



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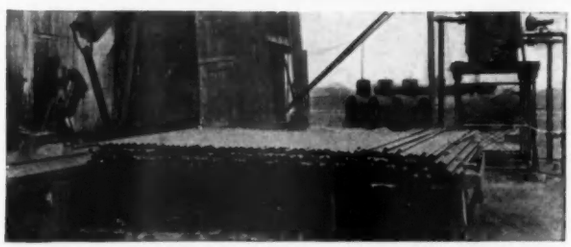

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ALABAMA

MADISON COUNTY — Tennessee Valley O&G Co.'s Fee 4, 1-4s-2e, show gas 300 ft, dr limestone 700 ft, (no recent report).

SUMTER COUNTY, (Livingston Dist.)—Forked Lightning O&G Co.'s Nixon 1, sw ne 30-20n-2w, dk.

WASHINGTON COUNTY—Hobson et al's Wilson 1, 27-7-1w, sd in limey shale 881 ft. Hobson Bros. 1, 9-8-2w, sd 1450 ft. Oscar Brown's U. S. Land & Cotton 2, 25-3-2w, sd 700 ft.

TENNESSEE

DECATUR COUNTY—Chester County O&G Co.'s Montgomery 1, sd 2075 ft.

SOUTH CALIFORNIA

ALHAMBRA—Fred H. Hammer's Huntington Land 1, 24-1-13, sd 3393 ft.

BASSETT — Huntington Central Oil Co.'s Pellissier 1, 34-1-11, lcn.

BELL—Cudahay Community Oil Ass'n.'s No. 1, 30-2-12, will make production test, td 1325 ft, shale and oil showings.

CALABASAS—L. W. Rucker's No. 1, 26-1-17, lcn.

CORONA—Western Gulf's Abacherli 1, 12-3-8, dr shale 2577 ft.

CULVER CITY — Olympic Oil & Realty Co.'s No. 1, 14-2-15, dr shale 5015 ft Taylor Oil Co.'s No. 1, 12-2-15, sd 6080 ft.

DOMINGUEZ—Tenacity Oil Co.'s Del Amo 1, 11-4-13, plugging back from 8500 ft, will make series of tests.

FULLERTON — Standard's Bastanchury 1, 21-3-10, coring oil sd, td 8145 ft, will make preliminary test of oil sand and shale.

HAWTHORNE — Jim Thorpe Pet. Corp.'s No. 1, 10-3-14, dr shale 3115 ft.

HERMOSA BEACH — Calico Royal Series' Calico 3, 6-4-14, dr shale 2515 ft. E. S. Cone's Kellogg-Burdick 1, 6-4-14, rigging up rotary. Corneil Oil Corp.'s No. 1, 31-3-14, rigging up rotary, td 3190 ft. Hermosa Exploration Co.'s No. 1, dr shale 1800 ft. R. C. Thomas' No. 1, 6-4-14, lcn. Tulsa Oil Co.'s Hermosa 2, 6-4-14, dr shale 900 ft. Westwood Pet. Co.'s No. 1, 6-4-14, dr oil sand 2350 ft.

NEWHALL — Consolidated Oil Co.'s Hammond 1, 8-3-16, dr shale 2620 ft. York & Smullin's Clampitt 6, 13-3-16, dr shale 1707 ft.

NEWPORT—Nuoil Co.'s No. 1, 29-6-10, sd 1370 ft. Standard's Irvine 1, 26-6-10, dr shale and slight oil streaks 4020 ft.

OCEAN PARK—Hines Pet. Corp.'s Happy Day 1, fsh for drill pipe 4910 ft.

OLIVE—The Texas Co.'s Olive Community 1, 7-4-9, dr shale 3865 ft.

PLAYA DEL REY — Mesmer City Realty Co.'s No. 1, 24-2-15, dr shale 4215 ft. West Port Oil Co.'s No. 1, 27-2-15, re-dr 4765 ft.

PUENTE—Rio Hondo Pet. Co.'s Rowland 1, 14-2-10, will deepen from 3725 ft. Rucker & Croul's Grazide 2, 22-2-10, dr gray sand 1978 ft.

ROSEMEAD—Rancho Oil Corp.'s Harmon 1, 30-1-11, dr gray sand 5405 ft.

REPETTO HILLS—Texas' F. M. 1, 4-2-12, dr hard sand 2615 ft.

SAN FERNANDO—San Val Oil Co.'s No. 1, 14-1-16, plugging back from 2045 ft, well showed water on test.

SUNSET BEACH—Gieck Oil Corp.'s No. 1, 20-5-11, lcn.

TORRANCE—C. M. Sheeley's No. 1, rig.

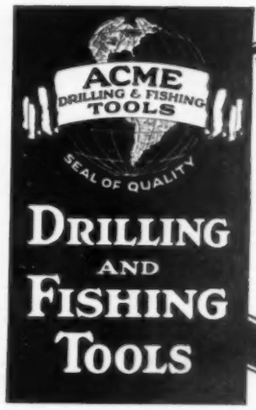
WILMINGTON—York & Smullin's Watson 1, 29-4-13, dr shale 3128 ft.

NORTHERN CALIFORNIA

Company, Well and Location	Initial Production Bbls.	Depth
KERN COUNTY—		
Chanslor-Cranfield Midway Oil Co.'s Villard 1A, 31,25-28	* 2555	

KERN COUNTY

BELRIDGE — Belridge Oil Co.'s No. 27-8, 27-27-20, sd 3730 ft; No. 27-64, 27-27-20, dr shale 2950 ft; No. 35-8, 35-27-20, dr shale 4058 ft; No. 35-33, 35-27-20, sd 3980 ft; No. 35-48, 35-27-20, sd 4760 ft; No. 35-49, 35-27-20, sd 1055 ft. Continental's Result 2, 36-27-20, dr



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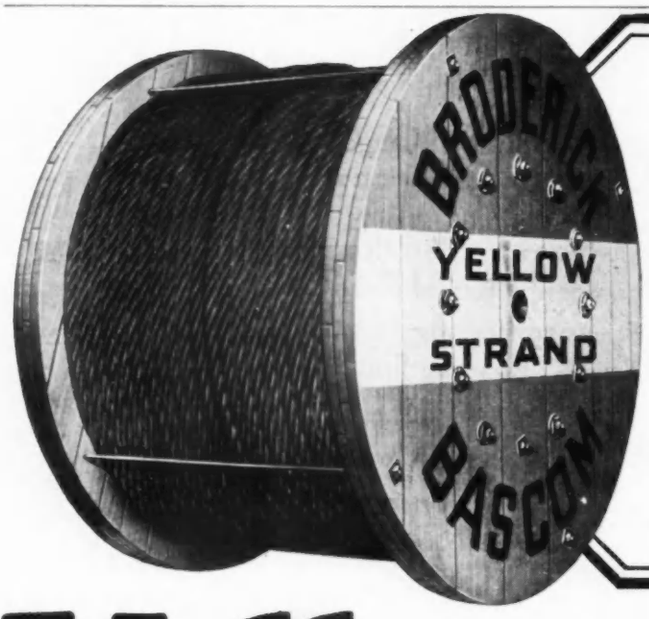

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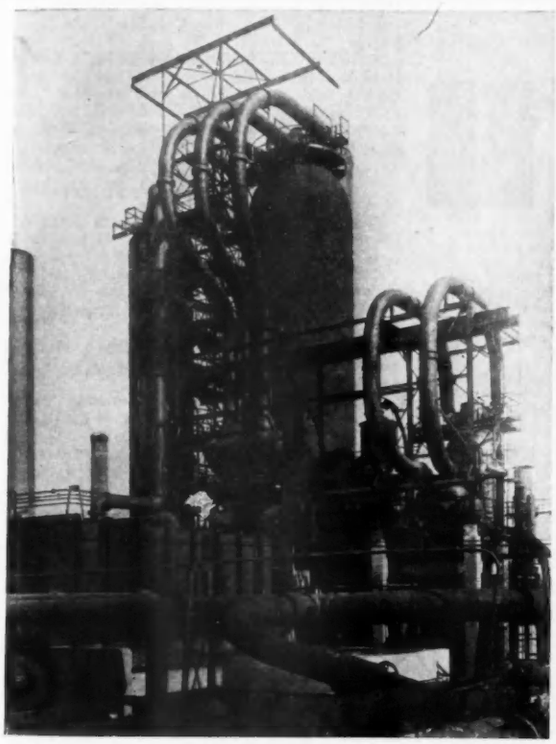

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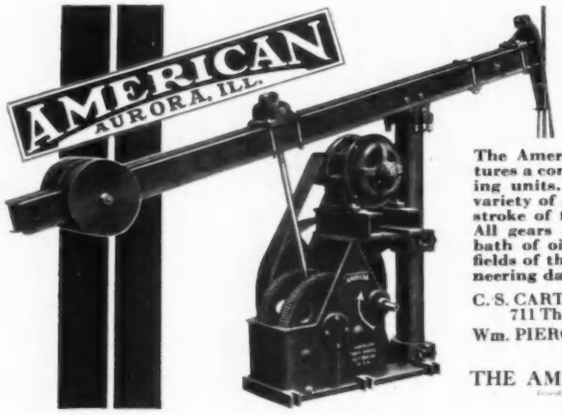

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shale 2085 ft. General Pet.'s Berry 1, 30-28-21, dr shale 3950 ft. Ohio's Bloemer 1, 36-27-20, making series of production tests, td 5980 ft. Reward Oil Co.'s Associated 4, 34-27-20, dr shale 4505 ft. Standard's McPhail 2, dr shale 5150 ft. Texas' Martin 1, 22-27-20, dr shale and sand 6065 ft. Union's Belridge 17, 36-27-20, dr oil sand 5555 ft. K. C. Wallace's No. 1, 32-29-21, co 4200 ft.

BLACKWELL'S CORNER — F. B. Langstroth's No. 1, 14-26-29, rig. E. J. Miley's No. 1, 17-26-19, rig.

BUENA VISTA HILLS—Federal Drilling Co.'s No. 6, 20-31-24, will make production test on pump, td 5367 ft.

BUTTONWILLOW — Wilshire Oil Co.'s Nordon-Salisbury 1, 7-29-24, co 6995 ft.

CARIZZO PLAINS — Panorama Oil Co.'s Panorama 1, 7-31-21, re-dr 2350 ft. Tray-El Oil Co.'s No. 1, 7-32-22, sdtr bit 1205 ft.

DEVIL'S DEN—Tom Hannah's No. 1, 25-25-18, dr gray sand 2905 ft. Standard's Alferitz 1, 14-25-18, dr shale 2610 ft.

SEMITROPIC—Shell's Williams 1, 17-27-23, swabbed to 5500 ft, hole bridged at 8600 ft, co 8750 ft, td 9702 ft.

SHALE HILLS—Rio Cal Pet. Co.'s No. 1, 2-27-18, co 2300 ft.

WEED PATCH—Alpine Oil Co.'s Di Giorgio 1, 13-31-29, dr shale 1600 ft. Mohawk Oil Co.'s Earl 1, 4-31-29, rigged to sp; Wharton 1, 32-30-29, re-dr 5808 ft. Osborn & Coulter's Shell 1, 15-30-29, rig. Shell's Morris 1, 32-30-29, dr shale 4700 ft; Porter 1, 29-30-29, dr shale 6180 ft; Porter-Day 1, 29-30-29, dr gray sand 8028 ft.

SANTA BARBARA COUNTY

COAL OIL POINT—Bolsa Chica Oil Corp.'s No. 191-1, 24-4-9, making series of production tests, co between 4020 ft and 4150 ft, td 4191 ft.

CUYAMA—Hart Pet. Co.'s No. 1, 27-10-26, rig.

GATO RIDGE — Barnsdall's Tognazzini 1, 9-8-32, m on bit 6115 ft.

GOLETA—General Pet.'s More 3, dr gray sand 4717 ft. George W. Johnson's Duncan 1A, 19-4-27, dr shale 1278 ft.

ORELLA—General Pet.'s Erburo 10, dr shale 1100 ft.

PURISIMA — Vaqueros-Major Oil Co.'s Union-Annex 3, testing water shutoff 3145 ft.

SANTA MARIA—Western Gulf's Bradley 1, 5-9-33, dr shale 5999 ft.

VENTURA COUNTY

BARDSDALE—Ross et al's No. 10, 12-3-20, rigging up cable outfit.

FILLMORE—Associated's Young 1, 16-4-20, grading for rig.

HOPPER CANYON — Bardeen Pet. Co.'s No. 1B, 13-4-19, rig.

OJAI—Drednaught Oil Co.'s Canet 1, changing to heavier equipment, td 2120 ft.

OXNARD — Magu Synd.'s Utt 1, dr hard sand 2100 ft.

RINCON—Chanslor-Canfield Midway's Hobson A2, 23-3-24, dr shale 8965 ft. Continental's Grubb 1, 23-3-24, dr hard sand 925 ft.

SANTA MONICA MOUNTAINS—Olympic Corp.'s Calabasas 1, 18-1-17, making production test, td 5685 ft, well swabbed water.

SANTA PAULA—Belga-American Oil Co.'s No. 1, 22-4-21, rigged up to sp.

SESPE—Merchants Pet. Co.'s Cochran 1, 1-4-20, will deepen from 900 ft. Superior's Kirtlan 14-1, 15-4-21, dr shale 6088 ft.

MISCELLANEOUS

FRESNO COUNTY — Associated's Mitchell 1, 22-21-15, dr gray sand 4375 ft.

KINGS COUNTY—T. H. Purman's Avenal 1, 36-23-17, co 2340 ft. Irma Investment Co.'s No. 1, 7-23-20, rigging up rotary. Kettleman-Lakeview Oil & Gas Co.'s No. 1, 11-23-19, mudding off gas, td 1285 ft. Valley Exploration Co.'s Brennan 1, 10-23-20, swabbing, td 3710 ft.

MENDOCINO COUNTY—Twin State Oil Co.'s Soldani 1, 14-12-17, dr shale 6455 ft.

SAN LUIS OBISPO COUNTY—Paso Robles Synd.'s Emerick 1, 34-27-11, fsh 3977 ft. Continetal's Hellman 1, 26-25-11, dr gray sand 5005 ft. J. D. Martin's Pricco 2A, sd 2965 ft.

SANTA CRUZ — Wellton Oil & Gas Co.'s Galletly 1, dr 2880 ft to test.

TULARE COUNTY — Big Four Drilling Co.'s No. 1, 29-23-27, co 4330 ft. George Knopp's No. 1, 20-22-27, dr shale 550 ft. W. D. McCoy's No. 1, 35-21-27, re-dr 575 ft. C. E. Pettingill's Campo Verde 1, 15-22-27, dr shale 500 ft.

▼ LETTERS ▼

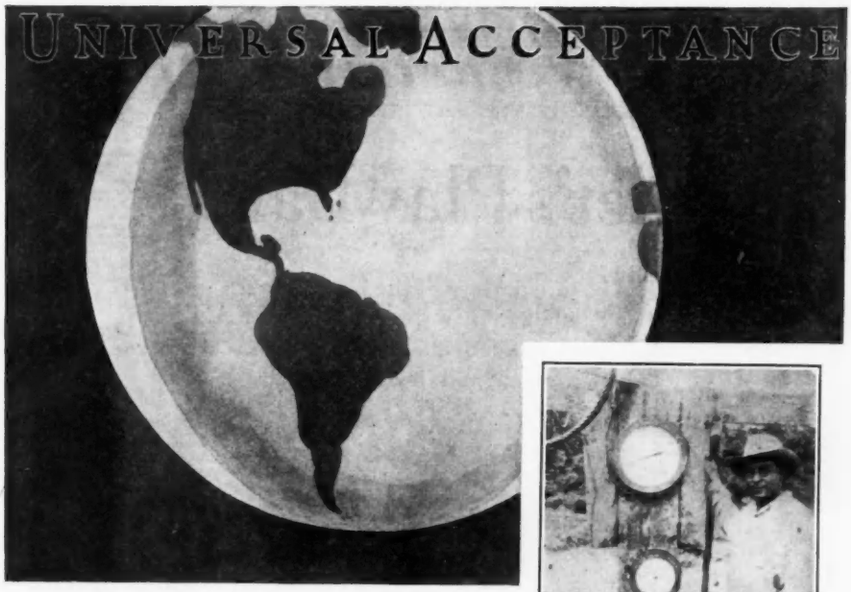
Dear Sir:

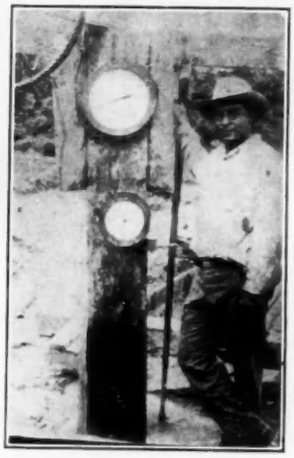
Why the United States petroleum industry is in its present condition is a question that cannot be answered simply. It is possible, however, to suggest a few major causes, namely, — over-drilling; over-refining; over-development of marketing facilities; excessive imports of low-priced crude and refined products; and, largely, lack of leadership in the industry.

With real leadership, there would not have been the serious over-production of oil and refined products during the past few years. Legislation to curb such a situation, if necessary, could have been enacted, prices stabilized, and the industry put on a profitable basis. We may have developed large potential reserves, but they would have been a benefit to the industry and not a calamity, as they have been to crude oil prices. Compulsory unit operation of oil pools must come and must remain at least until the time is reached when demand is greater than supply.

Since leadership did not come, and probably will not come, from the industry itself, it could have come through government agencies. A start was made in the Coolidge appointment of the Oil Conservation Board the latter part of 1925, but its power was very limited. At that time I stated to this board "that I do not believe the oil industry will become stabilized for many years unless there is some form of government supervision to regulate the production of oil for the present, and to protect the price structure later when oil will be imported cheaper than we can produce from proven reserves in fields from which the flush has been recovered." This government supervision, state or federal, has now taken the form of proration, laws against waste of gas, and more recently unit operation in California. Now the government should go a step farther and help stabilize prices by protecting the industry from the dumping on the Atlantic seaboard of cheaply-produced oil from foreign countries.

Just a word on oil imports. Should Russia attempt to dump oil in the United States, there would be a great outcry from everybody, including the officials of our large importing companies. But when our home companies bring in 100,000,000 barrels or more per year of cheaply-produced crude and gasoline, while the small domestic producer protests, the big fellow only points to the value of our export trade. Let us remember, however, that to compete in foreign markets from now on we must be able to sell cheaply; to do this, the exporting company must be able to buy cheaply. Since there is increasing competition with cheaply-produced Russian oil products, what chance have we of higher crude prices in the United States? Last year the value of our ex-





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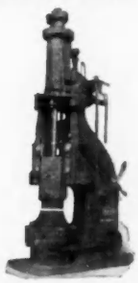

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ports was something over $500,000,000. Let us say that the few exporting companies made a profit of 10 per cent. This amount is the blood from thousands of producers in the United States, and to make this small profit and maintain their markets, a few companies have caused many times $50,000,000 loss to the man who cannot afford such loss, and yet the type of man that in the past the industry could not have dispensed with. As things look now, in the near future he will be dispensed with.

On the other hand, the American companies must maintain their supremacy in the world's markets. But could they not manufacture their oil products in Venezuela and other countries and supply their foreign markets direct? Why ship gasoline to the United States, depress the domestic price commensurately, then immediately export the same or similar product? Since we have always protected our home industries by a tariff, to be consistent, we should protect the oil industry similarly. Any crude brought in to be refined and shipped abroad could be admitted in bond and pay no duty. But why depress domestic crude and wholesale gasoline prices with resultant loss all around just to allign domestic prices with prices of foreign products?

Since the discovery of the new East Texas field and the low price for which the oil is selling, the large companies have a legitimate excuse for cutting crude prices in other fields to rock bottom. It is a calamity to the industry to have such a potential field unrestricted. At present prices, acreage cannot be drilled and the oil produced and any money made, only under exceptional conditions. Certainly in no fields can any profit be made in the producing end of the industry at present prices. There must be compensation in the refining and marketing, as the major companies are making fair returns on their capitalization. However, this does not help the independent producer.

The bad faith shown by the price-fixing companies in continually cutting crude prices even with proration being successfully administered, naturally has aroused the resentment of the independent and he may be partly justified in his opposition to restrictions.

Prior to the East Texas discovery, price cuts can be attributed, in part at least, to the depressing effect of excessive imports of crude oil and gasoline. However, the last drastic cut would have come anyway, as is indicated from Mr. Seubert's letter to Governor Murray of Oklahoma in which he stated that the reduction had been under deliberation for weeks. It seems unfortunate that Standard Oil Company (Indiana) made this last cut within a few hours after the adjournment of Congress and after it was definitely known that there would be no legislation enacted this year.

That the last several cuts in crude prices were fully anticipated in the higher circles, is indicated in the fact that a great quantity of oil stocks was judiciously liquidated on the stock market

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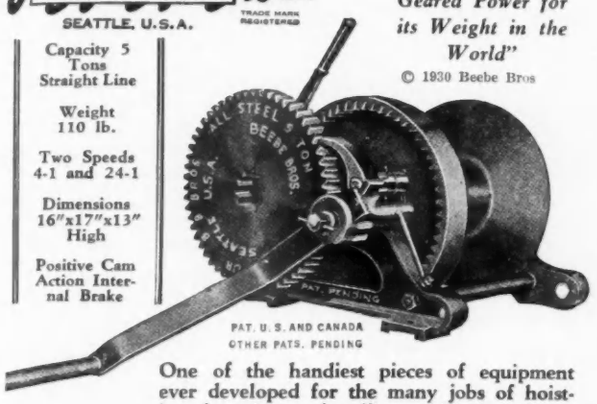

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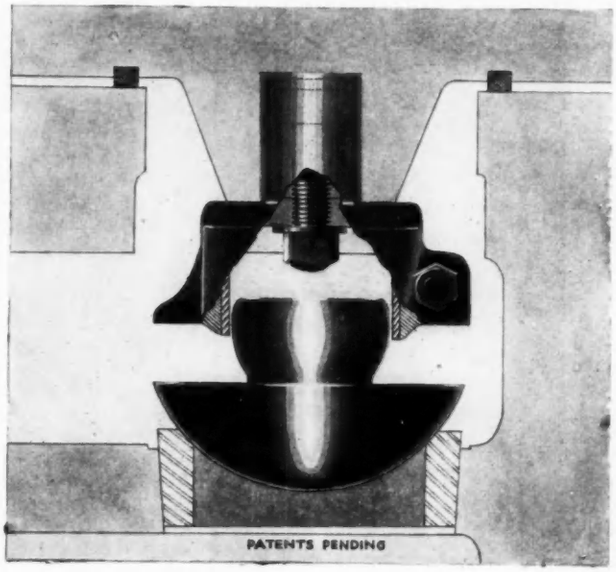

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throughout the whole second half of 1930. Where participated in by officials or directors of the companies, it was a case of selling their company, their stockholders, even their employees short. Probably no stocks were more adversely affected during the 1930 depression than the oil group.

Stabilization of the oil industry can be attained through the joint operation of three agencies; first, unit operation of new fields and curtailment of production to demand; second, operation of refineries to extent of requirements only; third, protection of fair established prices for crude and refined by a tariff on similar products shipped in from foreign countries to compete in domestic markets.

The tariff protection must come through congressional action; the second, or refinery output, will be governed largely by the amount of oil produced; limited and sensible production must, I fear, come through some form of government supervision or compulsion. If we could add co-operative marketing agreements to these, we might have a return of good times in the oil industry. Since it may be a long time before we shall enjoy any of the above conditions, the independent producer might well sell his holdings and buy the stocks of the major companies. He could make more in the end and certainly live many years longer.

Just a word regarding the oil potential, as the charts of the economist indicate there is a close relation between the developed potential and crude prices. The shut-in potential as of December 1, 1930, is estimated at some 11.5 million barrels. It is greater now with East Texas on the map. However, the question arises as to how much of this amount is real and actually could be produced. Winkler County, Texas, field is a classic illustration of the so-called and figuratively used potential and the actual potential. Yates is rated at a potential of over 5,000,000 barrels per day, yet the engineer knows that the field could not stand a daily production of more than a few per cent of this amount. Similarly, Oklahoma City, with the amount of water showing, could not produce more than a fraction of its rated potential. Hobbs will probably closely simulate Hendricks. While we have vast reserves developed for slow and scientific production, the actual possible daily production potential is not too great for stabilization and for the amount of reserves that should be back of such an important industry.

If we could translate the phychological potential into the figures of the actual potential; if we could regulate new production such as we have in East Texas; if we could protect our domestic prices against the depressing influence of cheaply-produced importations, there might develop a silver lining to the clouds that cover the oil industry at the present time.

STUART ST. CLAIR,
Consulting Engineer.
New York, N. Y.

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STATEMENT OF THE OWNERSHIP, MANAGEMENT, CIRCULATION, ETC., REQUIRED BY THE ACT OF CONGRESS OF AUGUST 24, 1912

Of The Oil Weekly, published weekly at Houston, Texas, for April 1, 1931.

State of Texas, County of Harris: ss.

Before me, a Notary Public in and for the State and county aforesaid, personally appeared A. L. Burns, who, having been duly sworn according to law, deposes and says that he is the Business Manager of The Oil Weekly and that the following is, to the best of his knowledge and belief, a true statement of the ownership, management (and if a daily paper, the circulation), etc., of the aforesaid publication for the date shown in the above caption, required by the Act of August 24, 1912, embodied in section 411, Postal Laws and Regulations, to-wit:

1. That the names and addresses of the publisher, editor, managing editor, and business managers are:
Publisher: R. L. Dudley, 3238 Huntington Drive, Houston, Texas.
Editor: S. W. Robinson, 5002 Scotland, Houston, Texas.
Managing Editor: J. Kent Ridley, 4401 Greely, Houston, Texas.
Business Manager: A. L. Burns, 4311 San Jacinto, Houston, Texas.

2. That the owner is: (If owned by a corporation, its name and address must be stated and also immediately thereunder the names and addresses of stockholders owning or holding one per cent or more of total amount of stock. If not owned by a corporation, the names and addresses of the individual owners must be given. If owned by a firm, company, or other unincorporated concern, its name and address, as well as those of each individual member, must be given.)
The Gulf Publishing Company, Houston, Texas: James Anderson, Houston, Texas; R. L. Blaffer, Houston, Texas; Mrs. Sarah Campbell Blaffer, Houston, Texas; A. L. Burns, Houston, Texas; J. F. Carter, Jr., Tulsa, Oklahoma; Dr. N. L. Dudley, Goose Creek, Texas; R. L. Dudley, Houston, Texas; W. S. Farish, Houston, Texas; Wm. V. Gross, Houston, Texas; Howard R. Hughes, Houston, Texas; Chas. H. Lane, Houston, Texas; Wallace E. Pratt, Houston, Texas; J. Kent Ridley, Houston, Texas; S. W. Robinson, Houston, Texas; R. S. Sterling, Houston, Texas; R. P. Swinsky, New York, N. Y.; O. R. Waller, Chicago, Ill.

3. That the known bondholders, mortgagees, and other security holders owning or holding 1 per cent or more of total amount of bonds, mortgages, or other securities are: (If there are none, so state.) None.

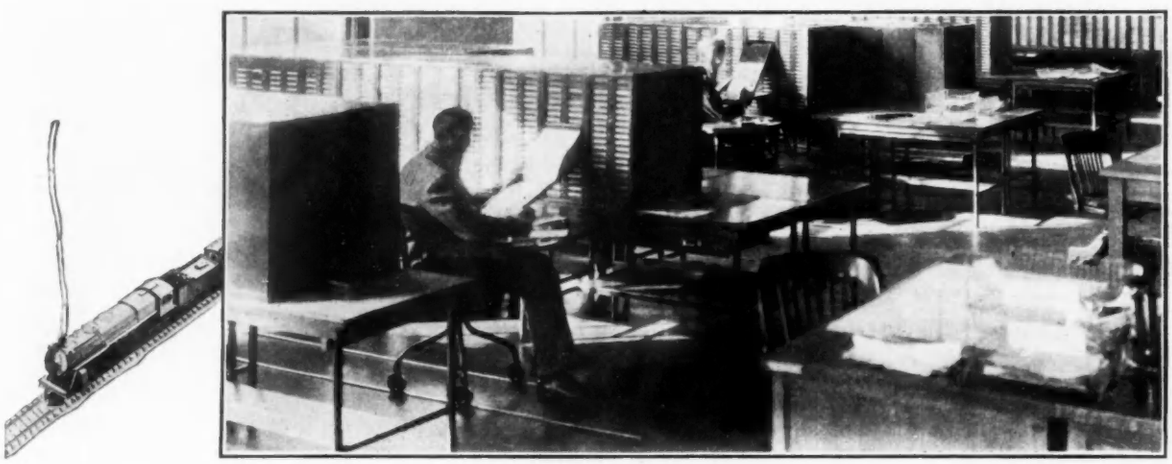
4. That the two paragraphs next above, giving the names of the owners, stockholders, and security holders, if any, contain not only the list of stockholders and security holders as they appear upon the books of the company but also, in cases where the stockholder or security holder appears upon the books of the company as trustee or in any other fiduciary relation, the name of the person or corporation for whom such trustee is acting, is given; also that the said two paragraphs contain statements embracing affiant's full knowledge and belief as to the circumstances and conditions under which stockholders and security holders who do not appear upon the books of the company as trustees, hold stock and securities in a capacity other than that of a bona fide owner; and this affiant has no reason to believe that any other person, association, or corporation has any interest direct or indirect in the said stock, bonds, or other securities than as so stated by him.

A. L. BURNS,
Business Manager.

Sworn to and subscribed before me this 3rd day of April, 1931.

(Seal) J. KENT RIDLEY.
(My commission expires June 30, 1931.)

Here's what it costs You to carry Stocks . .



. . *plus* a means of making it less!

MORE often than not it costs the oil producer 12 to 18% of his total inventory investment simply to carry stocks of supplies! Remington Rand statistics prove that wherever Kardex Stock Control has been installed, substantial inventory reductions have resulted. And every hundred thousand dollar reduction means an annual saving of $18,400.

Kardex presents for official action a perpetual picture of stock conditions. Every inventory fact and figure is flashed before your eyes. Every fact necessary to perfect stock control is presented by the Kardex fool-proof signalling service.

Card pockets carry records of all disbursements for purposes of comparison. Brilliant colored tabs flash 'time to re-order'—'on order'—'stock on hand.' Even a monthly record of quantities purchased, delivery time required and turnover is included.

Shortages in vital items that tie up men and machines are eliminated. Surplus and obsolete stocks become a thing of the past. Insurance costs are cut. Storage conditions become stable. Overages give way to profitable low level inventories.

If you are interested in effecting substantial savings thru the modern Kardex system of inventory management, mail the coupon now. A Remington Rand systems specialist will call, investigate your present methods and make suggestions that may save you many thousands of dollars.

Remington Rand

BUSINESS SERVICE

BUFFALO, NEW YORK

REMINGTON RAND BUSINESS SERVICE Inc.
Buffalo, N. Y.

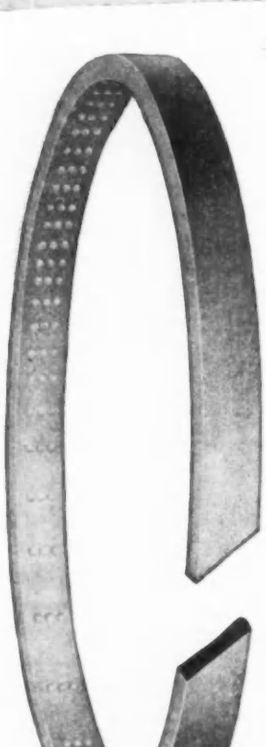
I am interested in Kardex Stock Control Systems.

Name _____ *Company* _____

Address _____

No Matter What Type Rings You Use

HAMMERING MAKES THEM BETTER



AMERICAN HAMMERED ANGLE JOINT RING

A one-piece, concentric, quick-seating, hammered piston ring with a 45° angle joint.

NO MATTER in what kind of engine a piston ring is used, it has two fundamental functions to perform. It must exert equal radial pressure all around to maintain compression, and it must retain this tension.

Because American Hammered Piston Rings perform these functions so perfectly, they are becoming more and more popular in all types of engines. *Hammered tension* assures equal radial pressure, for the hammering is a mechanical process, scientifically controlled.

As the hammering is on the inside of the ring, where there is no wear, the tension lasts as long as the ring itself. Wear can't affect it. Engine heat can't affect it. The tension is there to stay; it can't wear out!

In addition, all American Hammered Rings are individually cast, accurately machined, rigidly inspected and finished turned to produce a quick seat.

The American process of hammering is used exclusively in American Hammered Rings. Write today for our new hand book illustrating and describing American Hammered Piston Rings for all purposes. It is sent free.

American Hammered Piston Rings

AMERICAN HAMMERED CRONIN INNER SEAL RING

A two-piece, hammered compression ring consisting of outer and inner member, the inner ring having a lug completely sealing the joint of the outer ring. Most effective in out of round and tapered cylinders.

ENDORSED AND USED AS FACTORY EQUIPMENT BY

Ajax Iron Works - - - - Corry, Pa.	Dow Pump & Engine Co. - Oakland, Cal.	Pennsylvania Pump & Compressor Co., Easton, Pa.
Atlas Diesel Co. - - - Oakland, Cal.	Franklin Valveless Eng. Co., Franklin, Pa.	Power Mfg. Co. - - - Marion, Ohio
Bruce-Macbeth Eng. Co., Cleveland, Ohio	I. P. M. and De La Vargne Machine Co., Philadelphia, Pa.	Jos. Reid Gas Eng. Co. - - Oil City, Pa.
Bovaird & Seyfang Mfg. Co., Bradford, Pa.	Ingersoll-Rand Co. - - New York, N. Y.	Sullivan Machinery Co. - Michigan City, Ind.
Bradford Supply Co. - - Bradford, Pa.	McIntosh & Seymour Corp., Auburn, N. Y.	Titusville Iron Works - - Titusville, Pa.
Cooper Bessemer Corp., Mount Vernon, Ohio	Muncie Oil Engine Co. - - Muncie, Ind.	Wilson Snyder Mfg. Co. - Pittsburgh, Pa.
Chicago Pneumatic Tool Co., New York, N. Y.	National Supply Co. - - Toledo, Ohio	Worthington Pump & Mach. Corp., New York, N. Y.

Can Be Obtained in Standard and Oversizes from the Above Companies or Their Selling Agents

THE AMERICAN HAMMERED PISTON RING COMPANY · · · BALTIMORE, MARYLAND, U. S. A.

215 Market St., San Francisco, Calif.
501 Pico St., Long Beach, Calif.
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800 W. Rio Grande Ave., Fort Worth, Tex.
11 Moore St., New York, N. Y.
148 Pearl St., Boston, Mass.
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525 Poydras St., New Orleans, La.

HAMMERED TENSION CAN'T WEAR OUT

New Equipment for the Field

MACHINERY - TOOLS CATALOGS - BOOKS

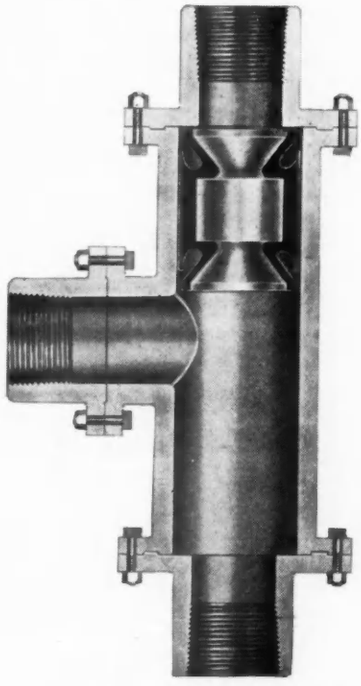
▼ ▼ ▼

Improved Manifold Valve

Brauer Machine & Supply Company

Brauer Machine & Supply Company of Oklahoma City is offering an improved type manifold valve in addition to the company's other valves.

The features of this valve are the new double cup plunger and flat face valve seats. This is to eliminate the trouble with the plunger sticking and also does away with the necessity of any additional packing means.



Brauer Manifold Valve

The plunger is of molded rubber around a steel core, to permit a metal to metal seat with a rubber seal against a flat face valve seat.

The fluid pressure exerted against the plunger cup also makes a seal against the cylindrical bore of the valve to prevent sand working around the plunger causing it to stick.

Further particulars can be had by writing the company's Oklahoma City, Oklahoma, address.

Truck Winch

CARL WHITE, JR.

Carl White, Jr., engineer, P. O. Box 2046, Tulsa, is introducing the R. F. truck winch, the use of which allows a truck to become a pulling unit without destroying the regular usefulness of the truck. It is designed to operate wells of shallow depth or deep wells alike. Installation of this unit on a truck permits the regular speed of the truck over the lease, or from one field to another, and at the same time allows for anchoring at any given point for handling a pulling job.

The winch is securely attached to the truck frame, directly behind the cab. It takes its power from the truck motor through the patented R. F. power take-off, which is mounted on the truck propeller shaft, thus giving flexibility of speed changes afforded by the truck transmission. Pulling power of the winch is governed by the power of the truck.

All rotating members of the unit are on roller bearings. Chain adjusters are built into the framework to eliminate the necessity of moving links or using idlers to take up wear.

Further particulars on this new winch for pulling jobs will be forwarded to interested operators upon request to the address given above.

R. F. Truck Winch

O-C-T Full Control Tubing Head

OIL CENTER TOOL COMPANY

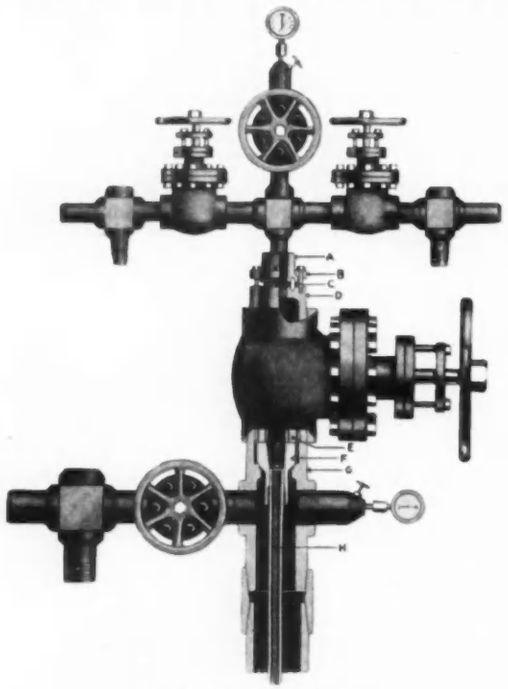
Oil Center Tool Company, Inc., Houston, announces it is in production on its new full control tubing head to permit the master gate valve to be closed at any time against pressure, with tubing in the hole, without making any adjustments on the head.

This O-C-T tubing head consists of a swivel connection unit which is screwed into the top of the master gate, a main body, and a tubing hanger which seats in the main body. The swivel connection unit is composed of the parts indicated by the letters "A," "B," "C" and "D." "A" is the top outlet, "B" is the loose flange ring, "C" is the bronze or steel seat ring, and "D" is the top outlet body.

The part indicated by the letter "F" is the tubing hanger; the letter "E" indicates the lock ring which locks the tubing hanger in place to prevent it from being lifted off its seat by pressure. The letter "G" indicates the main body of

the tubing head. The letter "H" indicates the tubing string suspended from the tubing hanger.

Features of the unit are that the master gate may be closed against pressure with the tubing in the hole without making any adjustments to the head. The tubing hanger seats on a steel to steel ground joint, there being no packing to replace, or to burn out in case of fire. The top



O-C-T Tubing Head

swivel connection unit is to allow the Christmas tree to be swiveled so the flow lines will point in any desired direction. To swivel the Christmas tree the bolts in the top swivel connection are loosened. Or, in the event it is desired to remove the Christmas tree it may be lifted completely off, without disturbing any pipe connections, by removing the bolts which hold the swivel connection together.

The O-C-T full control tubing head was designed for either flowing or pumping wells. When it becomes necessary to pump a well, the master gate may be removed and a regular coupling screwed between the main body of the O-C-T head and the top swivel connection.

A. M. Byers Company, Clark building, Pittsburgh, announces the publication of a 16-page bulletin, No. 50, devoted to covering pipe bending, the practice and theory of bending wrought iron pipe. This bulletin covers the subject of pipe bending well and in an instructive manner, and offers information of considerable value to men interested in this field. A point of interest is covered on page 2, "Minimum Diameter of Bends Which Can Be Made in Various Sizes of Byers Genuine Wrought Iron Bending Pipe," including a table showing some degree of flattening permitted. In this table is given the various pipe sizes with the minimum diameter of the bend, both of standard pipe and extra heavy pipe, and a line drawing to illustrate the subject, is carried. A. M. Byers Company will furnish a copy of this bulletin to engineers and pipe line companies upon request.

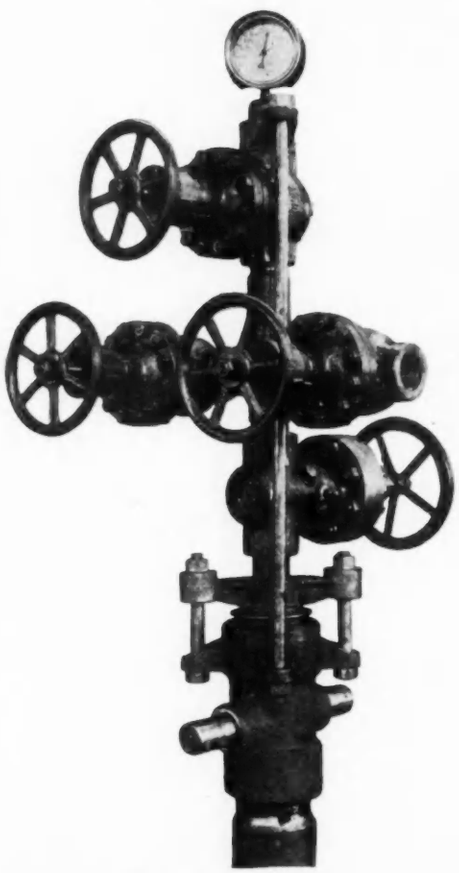
Tubing Head

CAMERON IRON WORKS

Cameron Iron Works, Inc., Houston, announces production on its new C-I-W Tubing Head, Tapered Seat Type, which incorporates many features that are new and novel. The head is very simple in design and construction, and is intended to meet the demand for a low-cost unit. Outstanding features of the new head are that it suspends and seals-off the tubing; provides for a quick emergency shut-in should the well kick or blow while tubing is being run; can be hooked-up so master gate can be closed at any time with tubing in the hole; and is adapted for use with a C-I-W Ram-Type Tubing Control Head above if desired to provide a safeguard against blow-outs, or should it be necessary to run the string under pressure.

A tapered landing collar suspends the tubing and seals it off when lowered into the tapered seat in the tubing head. Seal-off is accomplished by inserting a wide section of oil-resisting hydraulic packing in the taper of the landing collar. This is long-life packing, having held high pressure in one Louisiana well more than five years without a leak.

Threads in the top of the landing collar are furnished to fit any size steel nipple desired up to three-inch. Threads in the bottom of the landing collar are furnished for any size tubing up to three-inch, either standard or upset. Standard pipe threads in the top of the tubing head permit any desired type of well manifold to be built above the head. If



C. I. W. Tubing Head

Sam Houston

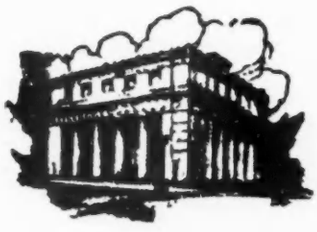
Another historical sketch, sponsored by the Houston National Bank, and based on the adventurous life of Sam Houston, will come to you Monday night at 10:15 from the skyline studios of Radio Station KPRC . . . Brush up on your Texas history! Learn the details of events which happened in the state you live in . . . and meet Sam Houston and the great men who helped him mold the destinies of the young Texas republic.

Let This Be Your Bank

Every business man has need of a banking connection. It gives stability to his business. It also provides a source of credit. Many Houston business men over a period of years have said, "My bank," when referring to the Houston National.

That little personal touch, that courtesy and consideration you have a right to expect from a big financial institution, have always been a part and parcel of the Houston National's plan. In addition, our customers have the advantage of dealing with a complete bank, which is able to meet their full requirements in a way most satisfactory to them.

The trend of modern business is toward greater organizations, mass production and narrower margin of profit. Now, if ever, careful planning of financial arrangements is essential; now, more than ever, is the advice of an old institution such as the Houston National an invaluable aid. On the basis of its record of over half a century, this bank offers its services to business men who are facing the new order of things.



HOUSTON NATIONAL BANK

Main at Franklin

These Exclusive Advantages Explain the World-wide Preference for No. 3 Beaver

No. 3 Ratchet makes quick easy work of all of 'em

No. 3 Beaver Ratchet
1/8" to 1" Inclusive
Buy any Range of Die Heads

Note the Oil Holes in the Die Heads

(Just one of *many* improvements made in the BEAVER Line. Ask for Catalog.)

No. 3 Beaver is an "all purpose" tool. Whether the pipe is in a corner—or ditch—close to walls or ceilings, or out in the open at the bench, No. 3 Ratchet threads it quickly and easily.

Bolt Die Holders, for use with No. 3 Ratchet take the standard makes of 2-inch round adjustable Bolt Dies regularly sold by dealers. A separate Holder is required for each size—1/4 to 1 inch.

1

The sturdy die heads are easily and quickly slipped in or out of the drive ring when changing from one size to another.

2

Cross-section of die head with dies removed. Note oil holes between the dies that permit placing oil directly on the face of the dies—assuring better threads and long life to threading dies. These oil holes also allow chips to fall out and away from the dies—further protection to dies and threads.

3

Die segments are square in shape—not weakened by a "shoulder" or offset. No "tip" to break off. Dies are electrically heat-treated and hardened by our own special process which provides each die with the maximum of perfect threading service.

4

Ratchet gear teeth are on a separate fully enclosed ring. Dirt and chips which act as an abrasive cannot enter this ring to wear down the gear teeth. An exclusive Beaver feature!

5

Note the broad, deep and square gear teeth — and the sturdy "full gripping" ratchet pawl that assures smooth ratchet operation free from back lash that results when exposed ratchet teeth wear down prematurely.

6

The construction of the drive ring is such that the die heads are held firmly in position and will not drop out when threading in inverted positions — also an advantage when starting a thread.

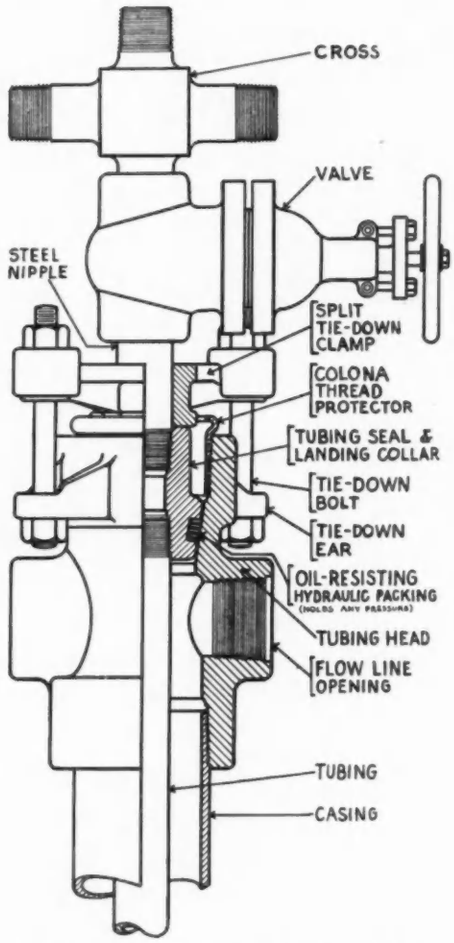
ALL LEADING SUPPLY HOUSES CARRY IT IN STOCK

Write us for catalog covering the complete line of new and improved Beaver Pipe Tools.

The Borden Co., 520 Dana Ave., Warren, O.

desired, a master gate may be installed between the tubing head and the Christmas tree. If master gate is used, it can be closed at any time with the tubing in the hole, because tubing is suspended below master gate.

When the tapered landing collar has been lowered into the head, it is locked with a split tie-down clamp. The feature of this clamp is the speed with which it can be put on or removed. Removal of two nuts permits it to be taken off.



Sectional View C. I. W. Tubing Head

Four heavy tie-down ears, cast integral with the head, provide for tying-down the tapered landing collar and also for tying the Christmas tree to the tubing head. A special clamp to fit over the bull-plug on top of the Christmas tree, and four steel rods threaded both ends, make a safe, low-cost tie-down arrangement.

If there is danger of the well kicking or blowing while tubing is being run, the tapered landing collar can be made up on the top of a double of tubing, with a valve above, and hung on an elevator in the derrick. In case of a blow, this double can be made up on the tubing string, the string lowered until the tapered landing collar seals-off in the head, and the valve closed.

Granger Indicator Company, Whittier, California, has appointed the Thrift Corporation, Merchants & Manufacturers building, Houston, as exclusive distributor in the Gulf Coast territory of the Granger oil field equipment, including the Granger tubing leak indicator and the Granger automatic tubing bleeder, which locks and unlocks in the well.

Manufacturer and Supply Dealer Notes

▼ ▼ ▼

Metalastic Inc., 546 Thirty-Ninth Street, Union City, New Jersey, has appointed General Supply Company, 317 Merchants & Manufacturers building, Houston, as territorial distributor for its line of packing.

The new Metalistic packing in coils for use in oil field and refinery equipment is described in an eight-page pamphlet recently issued by the company, a copy of which is available upon request.

Lincoln Electric Company, Cleveland, Ohio, announces the removal of the Chicago office to a new building at 1455 West 37th Street, from 53 West Jackson Boulevard. The move is made to provide additional space for the sales and service of Lincoln "Stable-Arc" welders, "Line-Weld" motors, and to provide additional storage space for a complete stock of welders, welding supplies and accessories.

Worthington Pump & Machinery Corporation, Harrison, New Jersey, announces the publication of a four-page specification sheet, W-112-S10, covering its horizontal duplex piston pattern oil pumps, Type S-P, a two-page sheet, D-423-ES, covering power pumps, vertical triplex single-acting, a four-page sheet, W-112-S11, covering horizontal duplex piston pattern heavy pressure hot oil pumps, Type S-P, and a four-page sheet, W-200-S10, covering the company's surface condenser, patented folder tube layer type. Any of this literature will be forwarded to interested oil companies upon request.

Hamer Oil Tool Company, Long Beach, California, has appointed the Thrift Corporation, Merchants & Manufacturers building, Houston, as exclusive distributor for the Hamer line of drilling and production equipment outside of California. This line, including the Hamer all-steel rotary hose, stock cock and the Hamer oil saver, has been sold by Thrift Corporation in the Gulf Coast territory for the past year.

Oil Well Manufacturing Company, 6000 Alameda Street, Los Angeles, has issued a series of bulletins, bound in loose-leaf file, covering the company's line of "Red Devil" equipment. Four pages are devoted to the slush pump valve of this line, eight pages to the all-steel rotary hose, four pages to a new patented pump liner, two pages to the pump rod and two pages to the company's "Red Devil" floating type eccentric for drilling engines. A copy of this loose-leaf catalog is available by writing the newly established Mid-Continent office at 317 Merchants & Manufacturers building, Houston.

Timken Steel & Tube Company, Canton, Ohio, announces the appointment of Walter H. Wiewel as sales manager, replacing A. J. Sanford, resigned. Mr. Wiewel has been associated with the company for several years as manager of steel sales in New York City. He will make his headquarters in Canton.

Titusville Iron Works Company, Titusville, Pennsylvania, has recently issued a series of eight folders of four pages each describing and picturing the latest improvements in the Titusville line of drilling and production equipment. The new Titusville twin cylinder steam engine, built for 350 pounds steam pressure, weight seven tons, a 12 by 12-inch twin cylinder roller bearing engine, totally enclosed, known as Type F, is briefly covered in one of these folders. The unique features of the Titusville No. 9 all steel enclosed flat top rotary are taken up in another folder, being pictured with a finished drawing and again with a detailed blue print. The Titusville Acme power pump is pictured and described with 12 outstanding features.

The Tico two cycle, twin cylinder enclosed gas engine is described in still another folder, which offers 15 reasons for valuable features in this product. The Acme No. 9 four-eight speed drawworks is shown in detailed line drawings and outlined in detail in another folder. A folder is devoted to the new Acme piston valve slush pump, which embodies 12 unique features. A detailed description is worked around a wash drawing of this pump and descriptive matter covers it in this folder. The pump described is 15 by 7¼ by 18-inch. The Tico rotary well drilling control is outlined in illustrated description in another bulletin, which takes up the nine points of perfection of this product. 12-Factory Supremacy is the title of another folder covering the Titan reversible roller bearing countershaft clutch, a product also of Titusville Iron Works.

Any one or all of these bulletins will be mailed upon request to oil men.

G. E. Moreland

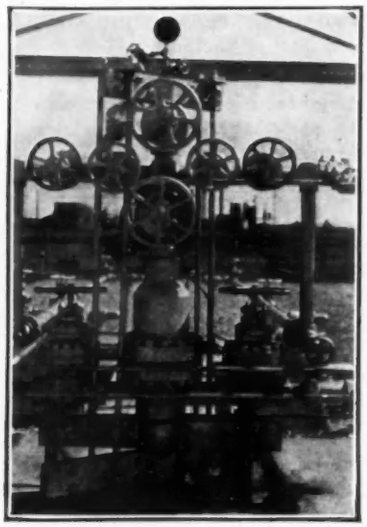
Byron Jackson Company, P. O. Box 1307 Arcade Station, Los Angeles, announces the appointment March 15 of G. E. Moreland in an executive capacity to maintain headquarters at the Main Los Angeles office. He was formerly

president of Western Forge Company, which he established as a pioneer in drop forging on the Pacific Coast in 1918. He served as production engineer for some time with Spang Chalfant & Company, Westinghouse Electric and Manufacturing Company, and also was associated with Moreland Truck Company.

American Metal Products Company, South 39th and Burnham Streets, Milwaukee, Wisconsin, has appointed General Supply Company, 317 Merchants & Manufacturers building, Houston, as exclusive distributors in the Houston territory, handling Ampco non-sparking tools for eliminating fire hazards and Ampco metal used in the manufacture of tools and equipment.

Catalog Number 3, covering the line of non-sparking tools, and Catalog Number 18, covering Ampco metal, are available by writing the Houston office or to the home office at Milwaukee.

Emsco Derrick & Equipment Company, Los Angeles, announces the publication of a 32-page bulletin, No. 6DB, devoted to covering D. & B. sucker rods and allied equipment. Aside from taking up the complete line, this bulletin goes into the heat treating of materials and the manufacturing process. A pictorial outlay takes the reader entirely through the plant, including the heat treating and metallurgy department of the company. Each item of equipment in the line is pictured and described, carrying a table of specifications. The bulletin is punched for insertion in loose-leaf file, and is thumb tagged for handy reference on sucker rods. A copy will be forwarded to production men upon request.



View of University B-3, Santa Rita, Texas, being tubed with a Warren Olinda casing head. The installation also includes two Shaffer flow beans. Both the Warren Olinda head and the flow beans are products of the Shaffer Tool Works, Brea, California.

Jones & Laughlin Steel Corporation has closed a deal whereby it takes over the plant of Lukens Steel Company at New Orleans, giving the former a direct outlet to the Gulf and sea-going vessels. In addition this plant will give Jones & Laughlin a large, modern steel fabricating, warehousing and distributing base near the mouth of the Mississippi River which can be served directly by river transportation from Pittsburgh.

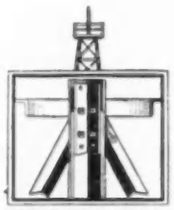
The Lukens warehouse and fabricating shop is on a 17-acre site on the turning basin of the industrial canal, about one mile from the Mississippi river, and about six miles from the center of the city.

With delivery of two modern towboats this spring, Jones & Laughlin Steel Corporation will have a river fleet of 12 towboats and 250 modern steel barges with a carrying capacity of 200,000 tons.

Oil Well Manufacturing Company, 6000 Alameda Street, Los Angeles, recently opened an office at 317 Merchants & Manufacturers building, Houston, to serve as the Mid-Continent sales office to introduce the company's line of "Red Devil" specialty products into this territory. Stocks will be carried at the Houston address and also by the Wallace Manufacturing Company & Supplies, Inc. of Oklahoma City. The company's "Red Devil" specialties include an all-steel rotary hose, a slush pump valve and a new type pump liner. W. P. Hart is in charge of Mid-Continent sales for the company, and is located at the Houston address.

WASHINGTON STRUCTURAL STEEL DERRICKS

1-5th the up-keep
MANY TIMES THE LIFE



WASHINGTON DERRICKS

The estimated average up-keep on a Washington Structural Steel Derrick does not exceed $25.00 per well per year. This consists of painting and replacing a few ordinary machine bolts. For the first few wells, the salvage value is just about 100%. After many years of service, the salvage value will be affected but deterioration is generally very slow.

Two dozen deep wells with a single Washington is not unusual service for these rigs. They are as permanent as it is possible to make them.

Rugged, fireproof, windproof, easily erected and dismantled. Their first cost is somewhat higher than for wooden structures, but they pay a much higher return on the investment.

Scientific design and patented double-spliced, super-strong joints give these derricks super-rigidity.

Write for newest catalog!

O'BRIEN STEEL CONSTRUCTION CO., INC.
WASHINGTON, PA.

Western Representative:
Rig Equipment Company, 1224 N. W. 33rd St., Oklahoma City, Okla.

Squeaks From the Bull Wheel

A red-haired boy applied for a job in a butcher shop. "How much will you give me?"

"Three dollars a week; but what can you do to make yourself useful around a butcher shop?"

"Anything."

"Well, be specific. Can you dress a chicken?"

"Not on $3 a week," said the boy.

Engine room rules at Midway station of Shell Pipe Line:

"Upon entering the engine room, spit on the floor. We have soap, lye, water, mops and brushes and we'll clean up as soon as you are gone. Run your hand over the engine's bright work. You will then know whether it is rough, smooth, hot or cold. If the machinery isn't running right, tell the engineer, as he is only here every day and will not know unless you do. If the engineer is busy, tell him a good story you heard the other day and if possible, get in his way. He is a good-natured cuss and won't mind. Tell all you know. It won't take long. Call again and repeat as above."

"Sorry, but you're too late for the job. I've already had 25,000 applications.

"Well, what about employing me to classify the applications?"

A sorrowing widow, having a memorial erected in memory of her late husband, had the following inscription carved upon it:

"Good-bye, Henry, my light has gone out."

Three months later when she remarried, some wit added to the inscription:

"But I have struck another match."

Pete—"Dark and stormy night and the old engine was coming down the track whistling, puffing and flapping its ears—"

Repeat — "Hold on, Pete, an engine hasn't got ears."

Pete—"Certainly it has, engineers."

She—Don't you know there are germs in kissing?

He—Say girlie, when I kiss I kiss hard enough to kill the germs.

Little Betty, aged six, was playing in the back yard and happened to go into the woodshed. To her surprise, she found puss in a barrel on some rags with four little kittens. After looking at the cat for a few minutes, she ran into the house, calling: "Mother! Mother!"

"What is it, darling?" answered her mother.

"Oh, mother," said Betty, "Old Puss has four little babies out in the woodshed and I didn't even know she was married!"

Alpha—What was the denomination of that bill you loaned me?

Theta—Episcopalian, I guess; it keeps lent.

A man was discovered by his wife one night standing over his baby's crib. Silently she watched him. As he stood looking down at the sleeping infant, she saw in his face a mixture of emotions—rapture, doubt, admiration, despair, ecstasy, incredulity. Touched and wondering alike at this unusual parental attitude and the conflicting emotions, the wife with eyes glistening arose and slipped her arms around him.

"A penny for your thoughts," she said, in a voice tremulous with tenderness.

Startled into consciousness, he blurted them out: "For the life of me, I can't see how anybody can make a crib like that for three forty-nine!"—L. & N. Magazine.

An Englishman, Scotchman and Irishman were drinking beer together. They discovered a fly in each of their glasses. The Englishman picked his out, the Irishman blew his out and the Scotchman wrung his out!

"And why did you put the baby in a sound-proof room?" asked the confirmed bachelor of the recent father.

"Oh, for cryin' out loud."

Mother: "But surely you didn't come right out and tell Jim you loved him?"

Daughter: "No, mother, he simply had to squeeze it out of me."

Aviator: "I was trying to make a record."

Farmer: "Well, you've made it. You be the first man in these parts who climbed down a tree without having to climb up it first."

Critic: "Ah! And what is this? It is superb! What soul! What expression!"

Artist: "Oh, Yeah. That's where I clean the paint off my brushes."

The prison visitor was going round the cells, and was asking rather fatuous questions. "Was it your love of drink that brought you here, my good man?" she asked of a prisoner.

"Lor', no, miss," replied the man, "you can't get nothin' here!"

APPLEMAN GUMBO BITS

For Smooth, Fast Digging

Scout: "Understand you fellows had a fishing job out here yesterday . . . what's the matter?"

Driller: "Yeah! The bit kept ballin' up and we backed off and lost six fourbles in the hole spuddin'."

Scout: "Well, at that rate you guys won't finish this hole for another month."

Driller: "Boy, if we could get a couple of APPLEMAN'S on this job I'd show you some **smooth, fast diggin'!**"

Write for complete information

B.K. APPLEMAN
BEAUMONT, TEXAS

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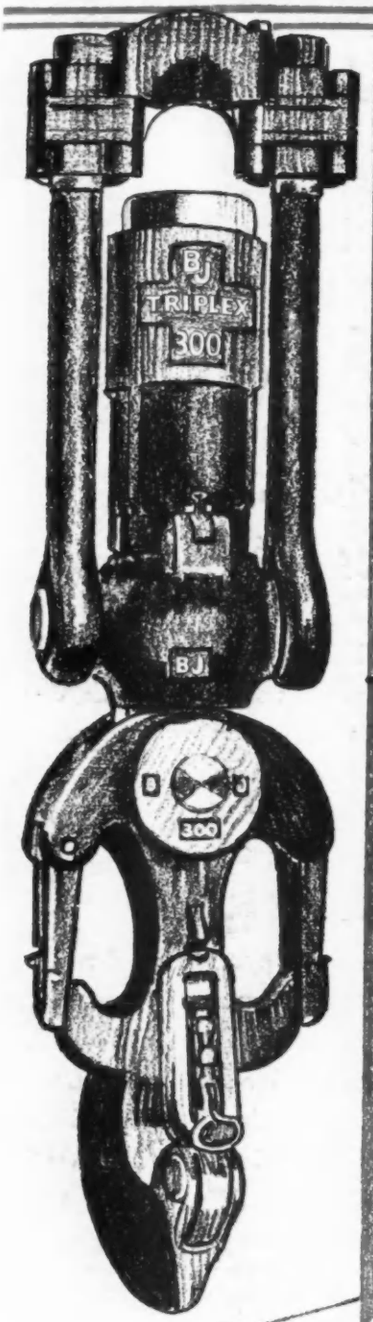

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